

NEWS SUMMARY

GENERAL

Skyjack jet leaves Dacca

Five Japanese Red Army guerrillas, with 36 hostages and \$6m. in ransom money, were reported to have been taken to Beirut after their jet was refused permission to land in Kuwait.

The aircraft left Dacca Airport, ending a prolonged drama which included an attempted coup by dissident Bangladesh troops. More than 100 people, including 11 air force officers, were reported killed during the short-lived revolt.

But the guerrillas managed to complete an exchange of 102 hostages for the ransom money and six prisoners released from Japanese jails and flown to Dacca to board the hijacked Japan Air Lines DC8.

Tanks full

The jet's fuel tanks were full, enabling it to fly non-stop for nine hours. Lebanon would be well inside its range.

The aircraft, which took off at 21.13 Dacca time (15.13 GMT), later flew over Calcutta and gave its flight path as including Bombay and Dubai. Page 5

Rome strike call

Italy's trade union federation has called a general strike in Rome today to protest at the street killing of a Left-wing militant by neo-Fascists which sparked off violent demonstrations in several major cities.

Export spur

Mr. J. Hugh Neill, chairman of James Neill, the Sheffield-based handtool group, has promised to give his white Silver Shadow Rolls-Royce to the selling agent who achieves the biggest export order, worth at least £1.5m, next year.

Belgrade talks

Delegates from 35 nations are gathering in Belgrade for the meeting to review the 1975 Helsinki Agreement on security and co-operation in Europe, which opens tomorrow. The talks are expected to last until December and may stretch on to February. Page 5

Lester's triumph

The Irish-trained colt Alleged, ridden by Lester Piggott, won the Prix de l'Arc de Triomphe, worth £150,000, at Longchamp. The English-trained Balmerino, ridden by Ron Hutchinson, was second. The Prix de l'Abbaye went to the British colt Gentilhomme, ridden by Paul Cook and tipped by Dominic Wigan. Page 2

Election off

Pakistan's military ruler General Zia-ul-Haq has postponed indefinitely the election due on October 15. All political activity has been banned and about 80 supporters of Mr. Z. A. Bhutto, the former Prime Minister, have been arrested. Page 3

Briefly...

Mr. Jack Lynch, the Irish Prime Minister, and Mr. Roy Mason, Minister of State, attended the ordination of Mr. Tomas O'Flaherty as Primate of All Ireland at St. Patrick's Cathedral, Armagh.
Tate Gallery public appeal for £140,000 to buy two paintings by George Stubbs, the 18th-century artist, has brought in £40,000 so far.
Five tons of hashish, worth about \$4m., has been seized by police from a Panamanian trawler at Ljuiden, Holland.
Jamaican-born PC Richard Hamilton, injured when his car hit a wall in Batham as he went to answer a bogus 999 call, died in hospital.
Temple of King Ptolemy VI, who ruled Egypt from 181 to 145 BC, has been discovered by a U.S. team at Luxor.

BUSINESS

Industry cautiously optimistic on outlook

RECENT signs of an improvement in the economic situation have helped to sustain business confidence, according to the latest Financial Times business opinion survey. However, the main area of uncertainty is over wages, with companies forecasting an average increase in wage costs of between 13 and 14 per cent.

Companies also see little chance of the rate of increase in output prices falling to single figures by next autumn. Back Page 37

A more optimistic forecast from the Confederation of British Industry indicates that price rises during the rest of this year could be within the Government's target of 13 per cent annual rate by December.

The CBI is also cautiously optimistic about the trend of wage talks during recent weeks although its overall view of the country's economic position is tempered by gloomy prospects for overseas trade. Back Page 3

PRE-TAX profits of the 141 industrial companies that issued full reports and accounts during September were 44.3 per cent up on comparable figures for one year ago. Back Page 6

U.K. OFFICIAL reserves are expected to show another substantial rise following the continuing strength of the pound during the past month. Back Page 6

U.S. ADMINISTRATION is considering temporary quotas to restrict imports of steel from Europe and Japan in response to protectionist demands. Back Page 6

GOVERNMENT could give an extra £1bn. of tax relief following higher personal tax allowances, claim Phillips and Drew in their latest economic forecast. In addition the Government should renegotiate the monetary ceiling for next year with the IMF. Page 7; Tax cuts forecast. Page 6

TOOLMAKERS have suffered some of the biggest losses of pay differentials among skilled engineers during recent years, according to a report from Political and Economic Planning. Page 33

JOURNALISTS from Fleet Street, Manchester and Glasgow are to meet to-day to consider the position on pay claims after an uncertain decision on the 12-month rule by the executive of the National Union of Journalists. Page 33

CONTAINER ship operations along the Atlantic and Gulf coasts of the U.S. have been halted by a strike of 50,000 members of the International Longshoremen's Association after talks for a new three-year contract ended in deadlock. Page 5

STOCK MARKET is planning to establish a "think tank" of senior brokers and jobbers to consider whether changes are needed to the way business is conducted. Back Page 6

ALCOA of Australia has agreed to supply 200,000 tons of alumina a year over a ten-year period to Dubai's new smelter plant which is due to come on stream in 1979. The deal will mean an investment of \$250m. for Alcoa. Page 4

New Companies Act in force

FIRST stages of the Companies Act 1976 came into force during the week-end. Public companies will now have to produce accounts no later than seven months after their financial year ends and private companies within 10 months. Company news, page 30

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Healey's intention to limit reflation upsets the Left

BY RICHARD EVANS IN BRIGHTON

Confirmation by Mr. Denis Healey, Chancellor of the Exchequer, yesterday that he intends to restrict the degree of reflation this year until he is able to make a more accurate judgment of the progress of wage settlements, is certain to lead to fierce trade union and Left-wing protests at this week's Labour Party conference.

The conference, probably the last before a General Election, will be dominated by demands for immediate Government action to reduce the record level of unemployment.

But Mr. Healey, buoyed by his successful visit to the IMF, is determined to avoid premature reflation.

The Chancellor has written to Labour's National Executive Committee warning that the prospect for prices next year "will depend critically on the nation's wages bill."

In a television interview yesterday, he hinted strongly that any nation this autumn would be limited to a "slow and steady" answer, he declared.

The Chancellor's attitude means that despite the dramatic improvement in the state of the economy since last year's bitterly divisive party conference, Mr. Healey will be at odds with the mood of many delegates when he speaks in today's economic debate.

Many trade union leaders and Left-wingers are demanding a boost to the economy of between 5% and 5.5%—and this is clearly not on.

In a three-hour pre-conference meeting of the NEC in Brighton, it was clear that the balance between Left and Right are very

evenly divided, particularly on the Government's handling of the economy.

To the intense relief of Mr. James Callaghan, the main economic resolution which supports the Government's economic measures, but calls for immediate action to reduce unemployment, and strict control of prices, was accepted by 15 votes to 11.

But a fiercely hostile resolution rejecting the Government's economic strategy completely

Other conference reports Page 7
Editorial comment Page 12

and demanding the implementation of Clause 4 on wholesale nationalisation was not thrown out completely.

Eleven voted to oppose it outright but they were defeated by 13 who asked only for remittance to the NEC.

So the indications are that Mr. Healey, who will speak from the rostrum rather than the platform, but for 10 minutes instead of the usual five—will face angry criticisms for his cautious approach to reflation.

Apart from full-scale debates on the economy and the Common Market, and the Prime Minister's address to-morrow, it was usually the private sessions

that could dominate the week. In particular, the resolution calling for the automatic reselection of Labour MPs during each Parliament could have a profound effect on future Labour representation and make it much easier for local activists to dismiss their MPs.

After a heated argument within the NEC, and against the recommendation of Mr. Callaghan and other moderates, the principle of automatic reselection was accepted, although not immediately.

The resolution will be put to the conference next year with firm backing by Mr. Ian Mikardo, Left-wing MP for Tower Hamlets.

The proposal, which follows a concerted campaign by the Left-wing over several years, is that the executive will return to the conference next year with firm proposals to implement automatic reselection. It was carried in the NEC by 15-13.

The chances are that it will be accepted by conference but, if rejected, the NEC will have to come back to the conference for a further three years because of party rules.

Mr. Healey, in his interview with Mr. Brian Walden on ITV's Weekend World, stressed that any move to shift towards reflation will be within the existing, unusually, the private sessions

Continued on Back Page

Jones attacks life-styles of some Labour leaders

BY CHRISTIAN TYLER IN BRIGHTON

A FORTHRIGHT attack on the financial probity and personal life-styles of some Labour Party politicians was made yesterday by Mr. Jack Jones, general secretary of the Transport and General Workers' Union.

He specifically referred to the Peachey Property Corporation and to the revelation that Lord Murray, a former adviser of Sir Harold Wilson, had been provided with a £10,000 loan and paid consultancy fees by Peachey.

But he said that his criticisms went wider than that, and complained, for instance, about big houses which some prominent Labour politicians lived in.

He would name no names but asked if his attack would include, for example, Mr. Denis Healey's farmhouse, he said: "Draw your own conclusions."

As leader of the party's biggest affiliated union, Mr. Jones called, in effect, for a purge of the party and of the trade union movement at all levels. He called for reversions to the old ideals of socialism and brotherhood.

His speech came after questions about his union's attitude to automatic reselection of MPs, one of the big issues of

the party conference opening here today.

Mr. Jones is attending the conference for the last time as general secretary of the Transport and General Workers' Union.

The union delegation has made no final decision but broadly supports the idea of reselection. Like the Engineers, who took a positive decision in its favour yesterday, this is on the basis that it would not happen immediately, but be a subject of a report-back to next year's conference.

Concerned

Mr. Jones talked of the need to re-build the party, which he said would depend on the example of the Labour Party.

"We are very concerned as a union at some of the things we have seen. We think it's time to have a clean break. It's time for the party to be again the party of principle."

Asked about the Peachey revelations, he said: "Members of the Labour Party and of the trade union movement should not be mixed up in these sorts of operation."

Only dedication to socialist principles would restore the faith of the party rank-and-file

and persuade them to take a more active part in its democratic procedures.

"It's time for people to reassess their values and practice what they preach. We are very concerned about the personal behaviour of some people."

At another stage, he said: "Look at some of the pictures that have been appearing in the papers of the big houses that some people live in."

Mr. Jones lives in a former council flat which he bought in South London.

Mr. Jones tied his remarks to the fact that he would be moving to a new house this week and to the abolition of the House of Lords. It is believed to be the first time that a big union like the TGWU has done so.

Apparently coincidental support for Mr. Jones' view came from Mr. Tom Litterick, the Left-wing MP for Selly Oak, Birmingham. He said at a Tribune Group meeting: "The present corruption makes Watergate look like petty larceny."

He warned of spread of corruption in the Labour movement and "throughout our politics."

Murray defends Peachey loan, Page 7

Doubts cast on usefulness of Kaunda-Smith meeting

BY OUR FOREIGN STAFF

STRONG DOUBTS were expressed last night whether significant progress in the search for a negotiated Rhodesian settlement had been achieved at the secret meeting between President Kenneth Kaunda of Zambia and Mr. Ian Smith, the Rhodesian Prime Minister, in Lusaka yesterday week.

The Rhodesian Government confirmed over the weekend that Mr. Smith had flown to Lusaka for six hours' talks with the Zambian leader, and said that the discussions had been about the Anglo-American proposals for a Rhodesian settlement. Rhodesian sources described the discussions as "cordial and wide-ranging."

A Zambian Government spokesman said the meeting produced "nothing of great significance," and said Zambia attached no great importance to it. Diplomats in Lusaka went out of their way to say that little had emerged from the meeting which one diplomat described as a "digression from the mainstream of the Anglo-American initiative."

Indeed it is understood that neither Britain nor the U.S. was informed about the discussions until they had taken place. It is also possible that Dr. Kaunda informed the other four African front-line States about the meeting only after it was over.

Dr. David Owen, the Foreign Secretary, said in a radio interview yesterday that he had been

surprised by the meeting, which he described as "very interesting development" and "a good sign."

It is thought that the initiative for the Lusaka meeting came from Mr. "Tiny" Rowland of London, which has interests in both Rhodesia and Zambia. Mr. Smith flew to Lusaka in a Lonrho executive jet.

It is thought that Mr. Rowland, who is a friend of both Dr. Kaunda and Mr. Joshua Nkomo, joint leader of Rhodesia's Patriotic Front guerrilla alliance, first approached the Zambian leader about a meeting, and then Mr. Smith.

Dr. Kaunda, it is believed, agreed to the meeting in the expectation that Mr. Smith would come forward with proposals for an accelerated transition to majority rule and, by implication, his own surrender of power.

Zambian officials said yesterday that Mr. Smith had been "as intransigent as ever."

Mr. Smith, they said, had raised objections to the provisions in the Anglo-American plan for a British Resident Commissioner in Rhodesia with total executive power during a transitional period. He had also objected to the partial disbandment of his Army and to aspects of the Bill of Rights that provides some guarantee of white property and civil rights.

In Salisbury it was thought likely last night that Mr. Smith

had gone to Lusaka to seek Dr. Kaunda's support for a strategy to split the Patriotic Front, an umbrella for Mr. Nkomo's ZAPU movement and Mr. Robert Mugabe's ZANU. Mr. Mugabe is anathema in Salisbury.

The feeling in Salisbury was that Mr. Smith had asked Dr. Kaunda to use his good offices in encouraging Mr. Nkomo, whose forces are based in Zambia, to consider a cease-fire on the Western "front" and to consider returning to Salisbury for talks with other nationalist leaders, the Rhodesian Government and British and UN representatives.

The Zambian reading of the situation, according to Presidential officials in Lusaka, was that Mr. Smith had acknowledged that international and military pressure had built up to such an extent that he was prepared to ask Dr. Kaunda for advice on the mechanisms of handing over power without damaging white interests more than necessary.

This advice Zambia was prepared to give, but Mr. Smith remained intransigent and apparently encouraged Dr. Kaunda to embark on bilateral discussions of the settlement process.

Mr. Smith, they said, intended to divert attention from the Anglo-American package.

The officials in Lusaka were adamant that Dr. Kaunda had made it clear he was sticking to

Continued on Back Page

Leyland and union heading for clash

By Arthur Smith and Christian Tyler

LEYLAND CARS is on a collision course with the Transport and General Workers' Union over the reform of industrial relations demanded by the Government as a condition of continued State finance.

Shop stewards representing 75,000 Leyland workers in the union seem likely to deliver a second rebuff to the company's proposed package of reforms when they meet in Eastbourne on Thursday.

Talks between the company, Mr. Jack Jones, general secretary of the Transport workers, and Mr. Hugh Scanlon, industrial co-ordinator of the engineering union, over the past two weeks have made little progress.

The major obstacle to agreement is management's insistence that a single bargaining unit should be established to conduct wage negotiations on a group-wide basis.

The engineering union, despite reservations, has accepted this as the way to open up differentials between skilled men — like the toolmakers — and general production workers, but the TGWU has not.

Mr. Jones said yesterday that a speedy introduction of incentive payments was the real answer to the company's crisis, and not the plan for company-wide bargaining. He and other TGWU leaders brushed aside a report that the company was planning to go over the union's head and introduce centralised bargaining which TGWU shop stewards have refused.

Mr. Harry Urwin, transport workers' deputy general secretary and a member of the National Enterprise Board, Leyland's principal shareholder — has accused the company of trying to bulldoze through its proposals.

He said yesterday that certain members of the Leyland Board were desperate and wanted to get their industrial relations reforms through at all costs.

The company had tried in the 1960s to force the abolition of piecework down the throats of workers and had suffered a 20 per cent loss of productivity as a result.

"The right kind of incentive scheme" could increase the company's output of cars by about that amount, he said.

The TGWU leaders were speaking after the union's delegation meeting before the Labour Party conference opens in Brighton today.

Mr. Jones attacked the capability of Leyland's management, accusing them of under-estimating the importance of incentives and said that a "very big question-mark" had been raised about senior management's ability.

Israel set for collision with Carter

BY ANTHONY McDERMOTT

A VIOLENT collision with the whole of the Gaza Strip and the Carter Administration on the West Bank from which Mr. Begin scale Israel has long been concerned to avoid now seems almost inevitable after yesterday's joint U.S.-Soviet statement on the Middle East, recognising the legitimate rights of the Palestinians.

In Jerusalem, the Israeli Government rejected the statement, and the Jewish lobby in Washington, which has already reacted powerfully and angrily.

President Carter is likely, also, to run into criticism from the Right-wing in Congress for directly and needlessly associating the Soviet Union with the search for peace in the Middle East.

The statement outlines the conditions for the reconvening conference of the Geneva peace conference, of the two superpowers are co-chairmen "not later than December 1977."

Israel's reaction has been determined but tinged with apprehension. The U.S.-Soviet statement was rejected by Mr. Simha Ehrlich, Finance Minister, who presided over the weekly Cabinet meeting in place of Mr. Menachem Begin, who has been in hospital since Friday.

Mr. Ehrlich suggested that Israel might have to adopt a state of emergency to resist the pressures of "the two powers (which) are exhibiting real signs of forcing an imposed solution on us, and we won't accept as imposed solution."

The Government might renew its call for a coalition of all parties (except the Communists) to deal with the crisis in U.S.-Israeli relations.

Israeli criticisms cover almost every aspect of the joint U.S.-Soviet statement. The first concern, highlighted in Israeli newspapers, was the reference to the "withdrawal of Israeli armed forces from territories occupied in the 1967 conflict."

Some emphasis is placed on the omission of the word "the" before "occupied territories." Nevertheless it is taken as meaning, in particular, nearly the

whole of the Gaza Strip and the West Bank from which Mr. Begin scale Israel has long been concerned to avoid now seems almost inevitable after yesterday's joint U.S.-Soviet statement on the Middle East, recognising the legitimate rights of the Palestinians.

The second concern is that a comprehensive solution may be imposed by the U.S. and the Soviet Union with the absence of any reference to the conclusion of formal peace treaties.

Thirdly, Israel sees a major erosion in commitments given by the U.S. in references to "the resolution of the Palestinian question" involving ensuring the legitimate rights of the "Palestinian people" where previously the U.S. had gone no further than referring to "interests" and to the "participation (at Geneva) of the representatives of all the parties involved in the conflict, including those of the Palestinian people."

The fact that the Palestinian Liberation Organisation is not mentioned is taken as only a minor consolation when set against what Israel sees as a general shift towards mounting support in the U.S. for the Arab States and organisations closest to the conflict have been favourable. Semi-official news agencies and media have welcomed the reproduction of the Soviet role and the first recognition by the U.S. of the "legitimate rights" of the Palestinians.

The Popular Front for the Liberation of Palestine, generally classed as a "rejectionist" group, described it with some reservations as "interesting."

In Cairo the semi-official Press said the statement represented a shift in Soviet policy towards the U.S. but mainly in the interests of not being excluded from Geneva and in order to preserve a détente and the "SALT talks."

Israel's U.S. allies dismissed the statement as "unimportant."

Consolation

Sugar deal near

GENEVA, Oct. 2

THE 72-NATION international sugar conference is expected to accept, when it meets here to-morrow, an agreement on a fixed price range of 11 to 21 cents a lb., reached last night by the world's major exporting and importing countries.

The agreement, which follows three weeks of negotiations towards an international sugar agreement to stabilise prices, was reached at a meeting at which the three big exporters—Cuba, Brazil and Australia, and the three big importers—Canada, U.S., were represented.

The conference chairman, Mr. Ernest Jones, of Britain, was also present. The six are said to have agreed in principle both on the price range and on the size of the proposed buffer stock—2.5m. tonnes plus 225,000 tonnes for the EEC.

Cuba, the world's biggest sugar exporter, has agreed for the first time to put limits on quota-free exports to all communist countries outside the Comecon bloc. Reuter

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LOMBARD

How to count Japan's GNP

BY CHARLES SMITH

THE JAPANESE economy is booming, or at least doing a good deal better than any of the other major OECD economies, say the Government's latest GNP figures. The Japanese economy is still obstinately refusing to move out of the longest recession it has experienced since the war.

Why the discrepancy between the official GNP figures and the growth rate in the second quarter of 1977 compared with the previous quarter and an all-time record of around 1,500 corporate bankruptcies per month at present? Because, say an ever larger number of independent Japanese economists, the figures do not tell the true story about the state of the economy any longer.

Zero growth

The attack on the GNP figures is being led by Professor Osamu Shimomura, the ageing enfant terrible of Japanese academic economists and the man who master-minded Japan's "income doubling" plan in the early 1960s. After being one of the most committed advocates of high growth in the 60s Professor Shimomura switched suddenly to being a prophet of zero growth at the time of the oil crisis. His arguments may be held suspect on the grounds that they tend to prove his prophetic right or on the grounds that they are a roundabout way of stating the obvious, but most people feel that Professor Shimomura has a point.

The essence of the Shimomura doctrine is that Japan's GNP growth over the past four years has been drawn to a suspiciously large extent from the overseas sector (that is, exports minus imports minus invisibles) considering that foreign trade still, actually, looms fairly small in overall Japanese economic activity.

The official economic planning agency figures show the real GNP growing by 13 per cent between the third quarter of 1975, or the end of the oil crisis, and the second quarter of 1977, 51 per cent of total growth, however, was contributed by the overseas sector which is an amazing figure for an economy which is still, despite all the outcry about Japanese exports, less internationally oriented than that of any of the major European countries.

Professor Shimomura says the share of the foreign sectors has been exaggerated because the deflator used to calculate the real value of imports (as

opposed to the nominal values shown in month to month trade figures) is inordinately large and much bigger than the deflator used to calculate real exports. The reason for the difference is that Japan's import prices between 1975 and 1977 rose a lot faster than its export prices so more allowance has to be made for inflation in calculating real values.

The consequence of the difference is that Japan's already massive current account surplus (in the past two years that is) becomes even more massive in relation to the rest of GNP when you reduce it to real terms. This means that the surplus shows up as a huge chunk of overall GNP growth although, as Professor Shimomura says, "so one 8.8 Japan feels any better off as a result."

Professor Shimomura has not suggested any way of totting up the GNP which produces a more realistic result but one of his associates recently came up with a set of real GNP figures in which imports and exports are deflated at the same rate as the factors making up the domestic portion of GNP. This has the effect of reducing the growth rate since autumn 1975 to 8.8 per cent, which, while more than zero, works out at something very modest indeed on a year-to-year basis.

Cancelled out

The EPA, which is the implied target of Professor Shimomura's attacks, is taking the line that all Shimomura is really saying is that much of Japan's progress since the oil crisis has been cancelled out by worsening terms of trade (that is, the faster increase of import prices than of export prices). GNP, says the EPA, is GNP and should not be confused with national prosperity which is something else again.

This position is clearly reasonable as far as it goes (although report has it that even the EPA is beginning to worry a bit about some of the processes by which it calculates GNP, including the formula for seasonal adjustments). The point is, however, that if GNP and national prosperity, or for that matter GNP and Japan's contribution to pulling the world out of recession, do not mean the same thing, it is high time that the Government of Mr. Takeo Fukuda should stop talking as if they did. To put it another way, Mr. Fukuda should realise that there is more to running the economy than hitting his Government's 6.7 per cent growth target for the current year.

THE WEEK IN THE COURTS

Cricketing benefits and the Revenue

BY JUSTINIAN

THE QUEEN'S Counsel appearing for the International Cricket Conference (ICC) and the Test and County Cricket Board (TCCB), Mr. Michael Kempster, may not have realised that, he was trading on delicate ground (not to say, batting on a very sticky wicket) when he cross-examined Mr. Tony Greig about the benefits that professional cricketers receive from their county supporters after a number of years' faithful service on the cricket field.

But certainly some eyebrows of the Commissioners of Inland Revenue and of some discerning fellow taxpayers will have been raised several inches to hear about the "tax-free benefits" that Messrs. Amis (£35,000), Knott (£27,000), Underwood (£24,000) and D'Oliveira (£45,000) received from their respective county cricket clubs.

Mr. Kempster's attempt to show how these players benefited hugely from their chosen careers in cricket may turn out to be a hostage to fortune.

To explain why, the reader must read on, and await the expounding of a case in the courts this summer.

Mr. Justice Templeman began his judgment on July 13, 1977, in *McGowan (HM Inspector of Taxes) v. Brown and Cousins (trading as Stuart Edwards)* with these words: "This is a puzzling problem. The Revenue claim income-tax on a gift made to a trader in the odd circumstances which I shall shortly narrate."

The story the judge had to tell was as follows: The taxpayers were estate agents who had been employed by a firm of builders in Croydon to purchase a site for development. A modest price was paid for the property; a modest fee was earned by the estate agents.

But it was the practice for such purchasing agents to do a great deal of extra work before purchase in making sure, for the protection of their clients, that all the proper planning permissions and services would be available to make the development a success.

It was also the practice—at least in the Croydon area—for such agents to be employed subsequently in the less onerous, but more lucrative (fee-wise) task of selling off the land as and when developed.

task of selling off the developed land. Not unnaturally the estate agents quickly feared their services to the third party. But the third party already had not by their own agents, and gracefully declined to employ a second lot of estate agents.

But what they were prepared to do, by way of solace to their lucrative fee, was to offer an gratia payment of £12,500. After grumbling at the decision and the size of the gift, the estate agents eventually got it doubled, and so they finished up with a "gift" of £25,000. Instead of the very much larger commissions which they had been confidently expecting to get when they acted first as purchasing agents for the builders.

Compensation

Was this £25,000 taxable? The Revenue argued that it was very simple. A payment received by a trader in compensation for the loss of an opportunity to make a future profit is a profit of trade, even though the payment is voluntary. QED.

The estate agents countered this argument by a less simple argument. They said that the payment was not taxable because it was not the direct product of the professional activities of the estate agents. This in turn was because, first, the payment was voluntary—although that in itself was not decisive—and second, it was made by the third party and not by the builders who originally employed the estate agents.

The third party had been under no legal or moral obligation to appoint the estate agents as selling agents; they were simply a company making a gift for the purposes of the company and not for the purposes of the estate agents in order to preserve the general commercial image of the third party as being reasonable developers and purchasers.

After reviewing five of the leading cases in this branch of tax law, Mr. Justice Templeman thought that the taxable/non-taxable line fell to be drawn between "gifts which had been earned" (taxable) and "gifts which were merely deserved" (non-taxable).

The test whether the gift benefit is taxable or not, the Packer camp will argue upon Mr. Kempster's suggestion like a batsman being bowled a long-hop, or whether it can be

referred to the conduct of the recipient.

The judge was obviously influenced by the consideration that had the £25,000 been paid not by the third party but by the original builders it would have been very difficult to say that it was not "referable to the work the agents had already done." The payment by the third party did not make the £25,000 any the less "earned."

How does this relate to the cross-examination of Mr. Tony Greig about the "tax-free benefits" cricketers habitually receive.

For reasons that are not immediately apparent ICC and TCCB seem hell-bent to publicise, in the full glare of the Press and public, the current size of ostensibly tax-free benefits of our leading cricketers.

To doubt the object is to controvert the Packer camp's point that by and large professional cricketers' earnings from the game (and from associated activities like coaching and umpiring) are miserably low, by pointing to the nest-egg that awaits the faithful cricketer.

Look, he seems to be saying, "they don't only earn what may be regarded as modest salaries, but there are the tax-free bonanzas awaiting them in the autumn of their playing careers."

When they have to leave the playing arena in their late thirties or forties to start a business or other job they will, unlike their fellow citizens, have a large capital sum to sustain them, which the taxpayer cannot lay his hands on.

If the line drawn by Mr. Justice Templeman in solving the "puzzling problem" of the estate agents' gift is drawn where it should be, then Mr. Kempster's suggestion is ill-founded—in which case the Inland Revenue has been wrongly neglecting to tax "earned" by the exertions of eminent cricketers.

(No doubt cricketers have not been assessed for tax on their benefits, but that is not to say that Inspectors of Taxes will not now be roused to assess those in receipt of benefits over the last six years.)

Whether the cricketer's benefit is taxable or not, the Packer camp will argue upon Mr. Kempster's suggestion like a batsman being bowled a long-hop, or whether it can be

Piggott tactics win Arc

JOCKEYSHIP may have decided on in tremendous style, the outcome of the £140,000 Arc de Triomphe at Longchamps yesterday, for whereas Lester Piggott rode one of the best-judged races one could hope to see on Alleged, Ron Hutchinson's tactics on runner-up Balmerino appeared singularly wide of the mark.

After the field of 26 had set off surprisingly promptly by French standards, it became apparent almost immediately that no one was keen to go on and set the usual frenetic early pace.

First, Malécote and then the rank outsider, Yelkouan, set a leisurely and muddling pace before, to almost everyone's surprise, Piggott eased the favourite into the lead. His posterior poised at its highest and most confident angle, Piggott dictated a brisk though not inordinately fast gallop before suddenly quickening the pace turning into the home straight.

The sudden change in tempo immediately had several of Alleged's well-fancied rivals in trouble with far too much leeway to make up in the short straits of the home straight. The favourite came right back to them.

This he did not do. Running

share in the heat the flag day to 60 per cent.

Balmerino's owner, Mrs. New Zealand, found handsome compensation. The £11,000 Balmerino collected for second prize amounted to nearly half the winnings collected by the runner-up in 21 previous victories.

The third, Crystal Palace, prominent from the outset with over threatening a blow landed about £40,000 for Baron Guy de Rothschild. Balmerino's fourth place effort produced another £15,000 for the royal exchequer.

Prices to a one franc stake win 4.00, places 3.50, 3.00, 2.50, 2.00, 1.50, 1.00, 0.50.

Two hours before the Arc, which saw Piggott sailing his 35 per cent favourite, the Gentildonna proved the "thing" must English visitors rated him when running with the Prix de l'Abbaye. Adams' top-class riding was almost all before them.

Isle of Man-based Mr. Sangster, whose wealth stems from Vernon's Pools may have gained even more pleasure from yesterday's race than from The 3,000 Guineas. Only recently Mr. Sangster reconfirmed his faith in Alleged (carrying his colours for the first time) by increasing his

RACING

BY DOMINIC WIGAN

had reached the post, the eight lengths by which Balmerino was trailing the favourite turned into home straight had not quite been eradicated.

For Alleged's connections, Robert Sangster and partner, trainer Vincent O'Brien, and jockey, Lester Piggott, this was another huge pay day in a spectacularly successful season. Since a loan period in the spring, O'Brien and Piggott have carried almost all before them.

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Forwards win for England

RUGBY IS an easy game when played from the comfort and critical impunity of the stadium. But when the core of the best place at Orrell's ground on Saturday when a gale ruined the match between England under-23s and their French counterparts.

England won 10-3 thanks to a spirited forward display. Sorrell kicked two penalties in the first half and Bell scored a try in the dying minute after a break by Jeavons.

Vivies kicked France's penalty in the second half when they had taken but not the forward resources to employ their three-quarters gainfully.

France has such a reservoir of talent that they need to stimulate the younger players and give them experience before they graduate to the national side.

On Saturday, the talent was

behind the scrum, which was in contrast to England.

While France scrummaged admirably, thanks to Colbourne's strong performance, their loose head, collective play was virtually non-existent.

They were outmanned about

RUGBY

BY PETER ROBBINS

ruck particularly in the second half. But they had two notable defenders in the flanks, Gratton and Buchet.

The shortage of possession was all the more inconvenient since Gallion, the scrum half and captain, was quick and accurate in his passing.

The slickness and sureness of the French passing was impres-

This accuracy and speed to the English cover and underlined England's particular deficiency—the lack of an authoritative halfback pair.

The malfunction at halfback dislocated the whole back of swing. Dodds and Sharrock, two good individual backs, but not pass fluently.

Carlton ran hard and fast with no hint of slowing down. Both tackled firmly as a result. Dodds and Sharrock, early on two occasions.

Clearly, the Canadian helped England and the p looked well drilled. Too much at times but the core of manly and rucking ability by the tight forwards and So mobility, too, and work at breakdown was uplifting to other forwards.

Classy Leeds dominate Chelsea

THE MOST impressive feature about the merited 2-1 win by Leeds United on Saturday was the quality of their football, despite a high, swirling wind and numerous uncompromising moves and to create the positive chances.

Following the interval, with the wind behind them, the home team began to exert more pressure, but one gained the impression that they needed luck, or a defensive error, if they were to score. Appropriately enough, their equaliser came direct from an inswinging corner.

Undisputedly, the ball was bitterly claiming that the ball had never crossed the line. Leeds came back to snatch the winner.

McQueen's header from a corner sent the ball into the net off Hankin, who, though he has scored consistently this season, looked rather over-weight, and

an hour for Chelsea to settle down and before that occurred Hankin might have put his side further ahead. Afterwards, the north-eastern club continued to serve up the more cultured moves and to create the positive chances.

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SOCCER

BY TREVOR BAILEY

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was the least impressive of the Leeds forwards.

Chelsea fought frantically to produce the equaliser in closing minutes, when a Hankin and Wicks were both for fighting, as Harris had been earlier for a late tackle.

There were only three former great Leeds team several years back in the on Saturday. Madeley, major as the second centre back, Ed Gray, formerly a left-winger, the central figure in mid-field and Lorimer, whose power and accurate shooting from his half was almost responsible for the goals.

In terms of attacking id and ball play a midfield trio Currie, Eddie Gray and Loris must rate highly, but when it can provide sufficient support for their rearguard in the m or under heavy pressure is to some doubt.

One of Chelsea's problems stems from a back four, with distribution out of defence is difficult conditions left much to be desired.

Official ban on 'carpet beater'

DAVID LLOYD'S 6-1, 7-5 victory over his former British Davis Cup colleague, John Pains, at the end of the period tournament in Edinburgh on Saturday, may have been a landmark in British tennis history.

Even while Lloyd was enmeshing Pains in the web of excessive topspin produced by the heavily-tensioned double-stringing system in his £140 Phantom racket, the executive committee of the International Tennis Federation were discussing, in Barcelona, whether they should ban this latest innovation, as requested by Austria, Switzerland, France, Spain and West Germany, after some freak results in recent tournaments.

That afternoon in a semi-final, the Aix-en-Provence tournament, Guillermo Vilas (Argentina) the new U.S. champion, had walked off the court in protest when trailing one set to two against another of the "carpet beater" brigade, Frenchman Edil Belkhouche.

Confusion has overtaken the sport since a mediocre German player named Fischer, using his new brain child, had shot to prominence a year or so ago

with some outstanding results that left behind a trail of frustration.

The first international player to realise the potential of the double-stringing racket was Barry Phillips-Moore, a 39-year-old itinerant Australian who is in the re-stringing business. Adapting and perfecting the intricate web of synthetic strings, knots and

plastic roller-bearings, Phillips-Moore began to offer a re-stringing service to his fellow pros at \$100 a time. He took out a patent on the system, and canvassed the leading manufacturers with a view to having it marketed worldwide.

The advantages of double-stringing rackets have been amply proved. Georges Goven of France, best of France in the Coupe Parre in Paris two weeks ago, then lost in a dull semi-final of high looping back to line rallies, to his young countryman, Chris.

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TENNIS

BY JOHN BARRETT

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GOLF

BY BEN WRIGHT

times finished in the top 20 as he has tried to rehabilitate himself. Early in his most significant placing was 15th in the Open and a World Cup partner for Tony Jacklin for England. He sent the third best British lumped disastrously to 43rd place in 1976, then clawed his way back to scrape into the 1975 14th in Germany.

With six holes to play, half-a-dozen players had a chance of winning on Saturday. Still in the violent wind that prevailed all

topher Roger-Vasselin, who lost easily to Vilas in the final.

The most significant result of the week was the 6-4, 6-5 win by the double-handed U.S. player Michael Fishback, over Phillips-Moore, a 39-year-old itinerant Australian who is in the re-stringing business. Adapting and perfecting the intricate web of synthetic strings, knots and

plastic roller-bearings, Phillips-Moore began to offer a re-stringing service to his fellow pros at \$100 a time. He took out a patent on the system, and canvassed the leading manufacturers with a view to having it marketed worldwide.

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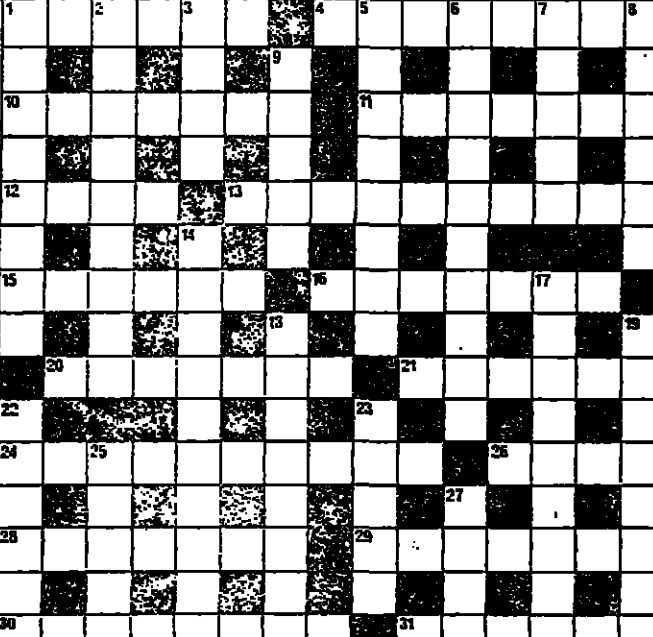
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F.T. CROSSWORD PUZZLE No. 3482



- ACROSS**
- German boy takes a little time to return in a cab (6)
 - United-by an agricultural machine? (8)
 - Petition to engineer a search (7)
 - Lost at sea, the doctor admitted (7)
 - The river to just (4)
 - Mediation between Arabs and Jews (10)
 - Professably expressed in schoolboy approval (8)
 - An expression of grief about liquor causes disturbances (7)
 - Commanded and arranged (7)
 - Doctor finds flower-girl in a bad mood (16)
 - They are said to think alike (6, 5)
 - As you pass, the tree is plain to see (4)
 - Sufferers go through it—it makes them ill (3, 2)
 - Cruising along like a crooner round the river (7)
 - We want one to start the fire—it's Nora's turn (8)
 - Origins, we hear, of sleeping places on board (16)
- DOWN**
- This is the place to guard the old outlaw (5, 7)
 - Lack of a billet shown by the mercurial (3, 7)
 - Love for the Benedictine—its overdue (4)
 - If there is noise in the exams, they give the order of sequences (8)
 - Highway in a Lanes town marks government property (5, 5)
 - You need a number to catch the composition (5)
 - The actor, including the theologian, is seen to shake (6)
 - You need little beef to govern (5)
 - Prosaic, but always on his feet (10)
 - A low fee? Stop! It's debatable (4, 5)
 - Les Price's letters about a famous Athenian (8)
 - Communications for a wise man in trouble (8)
 - Change of abode? You need something to build with (5)
 - The jugs sound as if they belong to you (8)
 - A female actor (4)

The solution of last Saturday's prize puzzle will be published with names of winners next Saturday.

Newscard, 5.05 Blue Peter, 5.35 Barabapapa, 5.40 News.

5.55 Nationwide (London and South-East only).

6.20 Nationwide.

6.50 Are You Being Served? 7.20 The Rockford Files.

8.10 Panorama: Mr. Ambassador Jay.

9.00 News.

9.25 Show Jumping: The Horse of the Year Show.

10.45 To-night.

11.25 Weather Regional News.

All Regions as BBC 1 except at the following times:

6.40-7.55 a.m. Open University.

9.30 Labour Party Conference.

11.00 Play School.

11.25 Labour Party Conference.

4.55 p.m. Open University.

7.00 News on 2 Headlines with subtitles.

7.35 Picture Making.

7.50 Newsday.

8.10 North Caine.

9.00 1980.

9.30 The Long Search.

10.40 Late News on 2.

11.20 Open Door.

11.50 12.25.

Barkworth reads "From a Museum Man's Album," by John Hewitt.

9.50 a.m. Schools Programmes.

12.00 Chriton and the Wheelies.

12.10 p.m. Stepping Stones, 12.30 The Flintstones.

1.00 News plus 1.20 Farmhouse Kitchen.

2.25 Labour Party Conference.

4.45 Raven, 5.15 Balmora.



Pauline Siddie and Vincent Brimble

Theatre Royal, Stratford E.15

The Curse of the Werewolf

It is good to see the Theatre Workshop at Stratford, E.15, returning to a semblance of its former self. Despite a thoroughly appropriate lack of social content, there is much in Rhys McConnochie's admirable production that reminds one of Joan Littlewood at her best: for instance, an entire 20-minute sequence is set on a frozen lake, the actors skilfully adapting their gestures and movement to sustain that impression while introductions are made between characters, a dancing couple slide gracefully by, a Prussian soldier with a mysteriously recalcitrant, black-gloved hand joins hilariously in a Tyrolean chorus, and Baron Martin Von Heilmann is revealed as an authority on wolves.

Ken Hill's vigorous script, after a prologue in which the curse is solemnly invoked on the baronetcy of Walpurgisdorf in a bleak churchyard, offsets the gothic chill with a 1920's glow. Dr. Hugo Bancroft, together with his wife and daughter Kitty, arrives in the charcoal black castle of his old school chum, Professor Konrad Steiner. Steiner is a spooky, psychoblast (the year is 1922) with ideas of creating a new species by mating a human with a werewolf. To this end he is surrounded by some odd lycanthro-

pic types for whom the Bancroft family, in the particular shape of Kitty, are suitable prey. Luckily, the Bancrofts are travelling with a loyal retainer, D'Arcy, an upright fellow given to singing about stars and sun-shine and who is, of course, really a Lord.

The Baron, a dashingly mustachioed figure in purple with a flashing resemblance to Errol Flynn, is soon seen in his true colour when the moon comes out, and the first act ends with Vincent Brimble undergoing a hairy mutation and carrying off the helpless Kitty (Pauline Siddie). D'Arcy eventually comes to the rescue, but not before a lot of entertaining hokum with bloodied hands, mad creatures in the wood, the strange appearance of a headless hunter and a vampire interlude in which Dr. Bancroft nearly loses his neck. The thinking, pastiche songs by Ian Armit and Ken Hill are funny, full and just the job. Darleone Johnson doubles effectively as Inezberg, a blonde maid in black leather, and the desperate wolf-woman; Martin Duncan is delightfully sanguine as the leechy D'Arcy; and Geoffrey Freshwater, looking like a physical similarity to Leonard Rossiter with a performance of sulphurous lunacy as the officious Prussian.

MICHAEL COVENEY

New End

Harry Outside

It is good to see the Theatre at New End open again and looking as smart as ever. American capital is the secret, and a season of American drama is the forth-coming programme under the aegis of Lawrence Taubman Productions.

It is not so good to see the first example of their initiative, for Corinne Jagger's *Harry Outside*, in spite of its title, is a dull and pointless play. Harry Harrison, its hero, played by Richard Kay, was a distinguished architect before he was sent to a bin for trying to kill his wife, his unacceptable reason for which was that she knew too much about his plans for destroying humanity. When we meet him he has been out for two months and resolutely refuses to go inside a house. He lives in a clearing in the woods (a pretty design by Eldon Elder) where he is working on a "project" of which neither he nor the author tells anything except that you can't live in it.

Harry is surrounded by a kind of commune. His wife Corinne, there, devoted as ever; his daughter Lois by a previous marriage;

a lesbian weaver, Susan; a committed potter, Irene; Lois's fiancé, George, who plays a recorder; an aging builder who is helping with the project. Their talk consists mostly of remarks about themselves which are not answered but met with equally self-absorbed observations. Though almost everyone seems to have sleep with everyone else or anyway means to, there is little communication between them. At the end of Act 1 Harry goes into the woods and blows his project up; at the end of Act 2 everyone except Irene leaves him and heads back towards civilisation.

As Susan says to Irene quite early in the evening: "It seems to me a story without any point." There is no mystery, no tension. The characters and their activities (if they may dignify their behaviour with such a word) are indeed pointless. The acting, however, directed by Mr. Taubman himself, is pretty good. It just seems to me a pity to have engaged players like Mr. Kay, Pippa Rowe, Katharine Schofield and Kevin Costello to take part in such a wilderness of inertia.

B. A. YOUNG

Birmingham Town Hall

CBSO/Handley

Sanctified by the first performance of Mendelssohn's *Night*, the Birmingham Festival has a recurring highlight of British musical life in Victorian times. Now its triennial presence is mostly unremarkable—even among the citizens of Birmingham, to judge by Thursday's teagay audience. The City of Birmingham Symphony Orchestra, conducted by Vernon Handley, noted for his abilities in modern music. A new work by John Casken, *Tableaux des Trois*, had been somewhat inconspicuously dropped into a programme of favourite Russian pieces.

Aldo Ciccolini, who was to have appeared in Rachmaninov's Piano Concerto No. 3, was indisposed. His replacement, Peter Katin, chose to play the Concerto No. 2 instead. How many dozen hundred times he has previously done so I would not care to guess but he recaptured the first two movements with true freshness. In the slow movement, the orchestra's solo cello contributed to a moment of particular inspiration. A pity that Mr. Katin should have bled the precise rhythmic incision in the opening subito of the finale.

Mr. Handley provided a finely ble accompaniment for the cello, having started the piece in exhilarating form. A different task was set him in John Casken's *Tableaux des Trois*, jointly commissioned by the Festival and by the Feney (which has sponsored such premieres in Birmingham). Here, within the structure, there are passages allowing a certain free-

choice to the orchestral players which the conductor has to time and to co-ordinate. Mr. Casken's work is fashionable; also in its large battery of percussion instruments (struck with a variety of beaters), its rhythmic complexity and its occasional use of quarter-tones in the strings. Less expected is the pictorial analogy: the work is named after a series of 19th century paintings by Gustave Moreau. The "three ages of man"—childhood, youth, maturity—are further equated in the score with the age of gold, silver and iron, and with the figures of Adam, Orpheus, and Cain.

Mr. Casken—who teaches in the music department of the University of Birmingham—is led by these concepts to a 17-minute piece of considerable character and great assurance, which may perhaps come to be ranked among the best of recent works by younger British composers. Born in Yorkshire in 1949, and having studied in Poland, Mr. Casken moves freely in the sound-world of Penderecki and Boulez but perhaps (if this work is typical) with more regard than either for conservative ideas of form. His work rises to a well-placed climax in the "Cain" section afterwards subsiding so that the end suggests the beginning again. He is already a virtuoso of instrumentation, down to such small, remarkable features as a combination of wood blocks, temple blocks and claves. Mr. Handley gave the whole work conviction and must surely be asked to conduct it in London soon.

ARTHUR JACOBS

Coliseum

Siegfried and Twilight

by MAX LOPPERT

Six days' pause between *The Valkyrie* and *Siegfried* can be tolerated more readily than an interval of similar length between any other two Ring operas during a complete Ring cycle. *Siegfried*, that great adventure of germination and fruition, brings to maturity seeds laid at the close of its predecessor; so time may be permitted to elapse in life just as we know it has in Wagner's epic. But in the current English National Ring cycle just completed, the excitement both fully worked up during the first two operas seemed somewhat dimmed by the time of Thursday's third instalment. There were still many vivid features of this *Siegfried*, not least a contest of knowledge between Wanderer (Rainald Herincx) and Mime (John Dobson) so cunningly played and crisply uttered that the theatrical point of the scene was clear on a way on occasions, it can fail to be. Yet it was hard to avail a feeling that on the whole fresh appreciation of musical detail and fresh grip on dramatic pace—

so rewardingly combined in Charles Mackerras's survey of the earlier operas—were meshing only intermittently. A somewhat muted hero and heroine must have played their parts in the damped-down quality of this performance. *Siegfried* without *Siegfried* does little justice to the charm of physique and personality, the intelligence carefully adjusting exact degrees of thigh-slapping frankness and sensitivity, the agility, of Jon Weaving in the title role. It also takes insufficient account of those moments when the tone broke free of constraints and impurities. The first half of the opera, with its hanging for voice of cleaner projection, if not of greater quantity, to fill out the music and complete the carefully defined characterization. Margaret Curphey is a clear, open, easy singer; but on Brünnhilde's rock she too appeared to lack the musical force for the heroic music. Though Mr. Weaving had not tired, their duet was a clouded conclusion, leaving the impression of two attractive performers coping bravely in roles beyond their natural compass.

So the attention was on the watchers and the schemers—on Wanderer Mime and Alberich (Malcolm Rivers), each in his way potent and assertive. Mr. Dobson's familiar Mime, new in English (which he enunciated with a relish that resounded through the theatre), was remarkable for its assembly of craft detail, and very colourfully and variously voiced—yet the total was a Mime on conventional outlines, comic-eccentric dotty rather than the notably powerful or even sympathetic figure of other portrayals. Helen Attfield's Erda was a prey to vagueness, Joy Roberts' gleaming-toned Woodbird to indistinct words (where is she now placed?). The adventure play-ground set of Act 2, dully lit, still proves an inadequate realisation of leaf, branch and undergrowth.

Saturday's *Twilight of the Gods* was a sharp contrast, above all in the pit, where the sound was once again keen and vital, urgently yet always sympathetically related to the action on stage, and greatly enjoyable for the

fund of well-characterised solos and lively textures. One indubitably heroic participant, Aage Haugland, as Hunding, shifted the centre of gravity in a fascinating, unlooked-for manner—his voice, filling the theatre with rock-solid sound, firm at extremes and used with the clarity (and, at times, the subtlety) of a well-played cello, his personality intent and formidable, this was nearly the audience's hero as he is Alberich's. Yet *Siegfried* and Brünnhilde made a much more positive effect—Miss Curphey, in particular, was often brave and affecting. Gunther (Norman Welsby), Gutrune (Ava June), Waltraute (Katherine Pring) are familiar assumptions, freshly rendered. At the end, one was left with confirmation of the conductor's greatly increased Wagnerian mastery: with admiration for the company; and with an overriding sense that all contributions must be placed in the context of the unusually illuminating, musically devoted Wagner style that is now the ENO hallmark.



Karl Johnson, Jeffrey Kissoon and Nick Edmett

Greenwich

Barbarians

by B. A. YOUNG

Barbarians is a run of three ambitious of the three, in a good of Barry Keefe's one-act plays (trade with his own van). They about the underprivileged meet at the Notting Hill Gate National Youth Theatre played all of them.

Abide with Me, set in formerly at the Soho Poly, and *In the City*, which I take to have been written to round off the trilogy. They are played against a permanent set by Vortek, a scrupulously well bearing a message about G. Davis that must currently be contempt of court.

Killing Time shows Paul, Jan and Louis in the dead period of unemployment after leaving school, picking up casual money by "spotting" cars for a car-chief, stealing goods if it's easy enough. None of the work they are offered suits them; hanging about the streets will do until some vague stroke of good luck helps them along.

In *Abide With Me* they have all gone to work in the tin-can factory they so despised before, and have enough money to enable them to follow Man-chester United to every future—even to the Cup Final. Though the high hopes tickets Jan is to have from his uncle lead to nothing but frustration. In *The City*, the least convincing of the three, shows them entering adult manhood—Jan in the Army, on the eve of emigration for Belfast, Paul a victim still, and Louis, always the most uncom-

The Entertainment Guide is on Page 37

O'Casey's speech does to every day Dublin. Karl Johnson is Jan, the weakling, who follows the gang; Nick Edmett is the arrogant, quarrelsome layabout Paul; and Jeffrey Kissoon is Louis, a Negro, whose ambitions towards education and an honest living lead to their just results until Paul kicks him to death at Notting Hill, with a little help from *The City*, the least convincing of the three, shows them entering adult manhood—Jan in the Army, on the eve of emigration for Belfast, Paul a victim still, and Louis, always the most uncom-

Collegiate

Infidelio and Dawnpath

by ANDREW PORTER

Last week the New Opera Company presented a double bill of chamber operas: Elisabeth Lutyens's *Infidelio* and Nicola LeFanu's *Dawnpath*, both of them superbly conducted by Leon Lovett. *Infidelio* was a revival, staged by Roger Williams, of Anthony Beech's 1973 production, described in these pages by Elizabeth Forster. The work is a dramatic cantata—recitatives, arias, duets—for soprano, tenor, and seven players (flute, clarinet, bassoon, viola, guitar, percussion, and celesta). The subject matter is a love affair that went wrong. It begins in winter, after the woman's suicide, and moves back through a troubled autumn of parting and a high summer of love, to a springtime of expectation.

Although the piece, which lasts about 25 minutes, was composed in 1954 (before the vogue for "music theatre," or

concert-platform opera, began in earnest) the 1973 performance was its premiere. In this production, the two singers stand on a bare stage while behind them the "action" unfolds in a series of expressive photographs, taken by John Haynes. *Infidelio* is a small, masterly work, passionate, delicate, and precise. Its particular eloquence lies in the writing for the little orchestra, but the instrumental lines and rhythms grow from the lines of the libretto. Miss Lutyens's own, as declaimed with lyrical freedom across a very wide range. The composer is sensitive to the weight, speed, verbal sound, and natural inflections of her lyrics. Although some words are inevitably lost when the singers soar above the stage—the tenor to D. the soprano to G—the emotional sense remains clear. In fact *Infidelio* is in all ways a clear and shapely work—in its form, in its fluid but appre-

hensible rhythms, in the mastery control of harmonic tensions and emotional colours. The soloists were those of the premiere: Alexandra Browning and John Winfield. She is a beautiful and moving singer. He was less poetic (to the critics but not the public) as announced that he was suffering from a heavy cold, but equally intelligent and sure.

Dawnpath is the fifteenth opera to be given its premiere by the New Opera Company, and its first commission. It is a work for soprano (Jane Manning, making one of her rare operatic sorties), baritone (Tom McDonnell), dancer (William Louth, who also choreographed the show), and an ensemble of flute, clarinet, horn, cello and percussion. It lasts about 30 minutes. The libretto, the composer's own, is based on two American Indian legends: (1) "The first being was lonely by himself on earth, and so he sang; and in his singing all the creatures and living things of the world were created." (2) "The first beings on earth were given the choice of living for ever in darkness or of dying that night might always give way to day."

Man begins to sing; the dancer is world, wind, water, tree, horse, and especially deer. Woman is created by the song. Man becomes aggressive, possessive ("mine the deer, mine"). Deer dies. Darkness comes. Woman persuades Man to go with her along the flower trail, along the Milky Way, following the dawnpath. All this takes place to gentle, delicate sounds, vague fronds of sweet lyrical melody, soft-woven pianissimo webs of lapped lines, shot through with dainty flurries and patterings. Miss LeFanu is a skilful composer. If I say, unkindly, that I found her piece at once clumsy and pretentious—in a word, arty—let me add that it makes consistently agreeable noises, set down by a hand controlled by an acute ear.

The end of the piece is a very simple and rather beautiful inspiration: shining long G's in all from Miss Manning, touched dead centre, as all her notes were (though some earlier notes juddered after the first touch), in which Mr. McDonnell added middle C's moving to D's. Peter Docherty designed striking costumes and a less interesting scene. The players in both pieces were expert. *Dawnpath* is easy to listen to, and *Infidelio* should not be missed.

Wigmore Hall

Craig Sheppard

by DAVID MURRAY

Sometimes Craig Sheppard seems to offer just so much a repertoire as a restless Cook's Tour of the piano literature; one never knows where he will touch down next, nor whether his command of the vernacular will go beyond what a Berlitz crash-course could impart. He is a not-able quick-study, technically fluent, with the natural pianist's flair for drawing toothsome sounds from his instrument and for making some definite effect at every point. On Saturday his ports of call were Schubert, Schumann and Skryabin; there he was the perceptive tourist but the sense of relief on the home journey to Liszt—Au bord d'une source and the 19th Hungarian Rhapsody, dashing assured—was unmistakable.

Sheppard lingered tenderly over the Allegro moderato of Schubert's earlier A major Sonata, D.664, and with insistent, even glutinous pathos over the slow movement. A certain brittleness about the waits which returns again and again in the Finale lost its heart-tugging quality. The Schumann was his op. 21, the large and gnomic *Humoreske*; Sheppard displayed the sheer strangeness of the work most vividly, moment by moment—but its calm breadth was never brought into focus. It is full of long lines which Sheppard baited with nervous springs, as if a constant

fabrile anxiety were about to explode. The rhythm was dangerously unstable, leaping hastily off first beats like hot pebbles. Repeatedly in the long-extended accelerandi and ritardandi, he reached his maximum or minimum speed far too soon and had to improvise spurious bursts of passion to fill the space.

Similar failings grossly disfigured his Skryabin performances, which were in any case the merest sketches: a pity, for temperamental—as his ultra-delicate account of the little "Nuvole" from op. 55 showed—he might be a fine Skryabin exponent. But his rhythmic inaccuracy in the 6th Sonata was scandalous—the piece seemed indulgently formless which it is not—as also in the op. 58 Prelude. The notion of Skryabin trading so nervously with rubato is quite false; his own playing was admired for its tact, precision and clarity, and the construction of the late sonatas is scarcely less mathematically balanced than that of Beethoven's later music. And yet this is territory which one wishes Sheppard may revisit at greater leisure: many iridescent passages in the 5th Sonata, amid the hasty stabs, indicated a heart in the right (peculiar) place, needing only less exacerbated nerves and a cooler head.

Westminster Cathedral

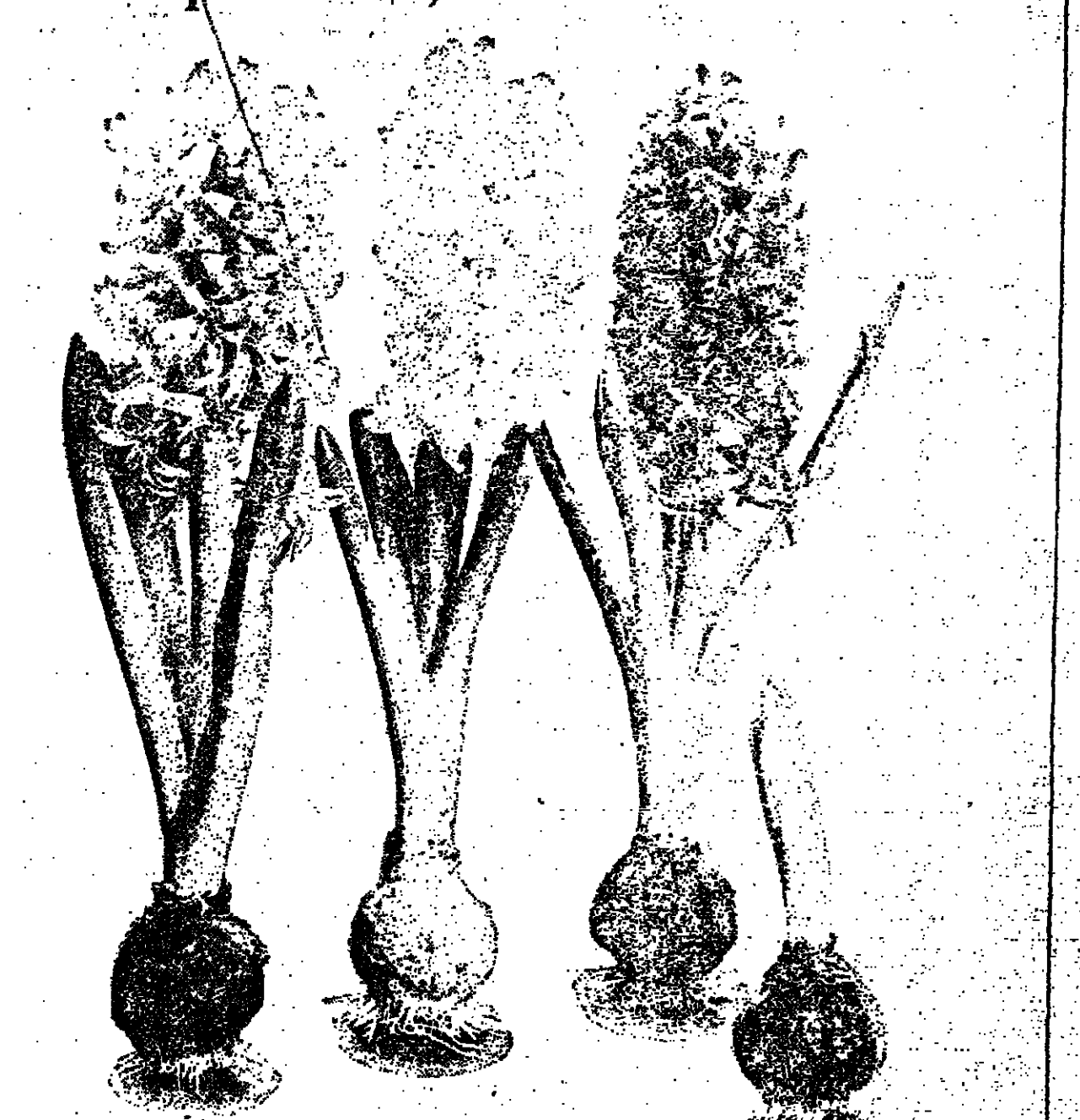
Winchester Cathedral Choir

by RONALD CRICHTON

In aid of the appeal fund, Westminster invited the choir from Winchester on Friday to be the first Anglican body to give a concert in the cathedral. Martin Neary, the organist and Master of the Music at Winchester, chose his programme with a combination of musical and diplomatic skill well suited to an ecumenical occasion. Byrd the Catholic recusant was there, and Tye the Protestant; both composers wrote Latin and English church music. There was Philipps, an Englishman who settled abroad; Samuel Wesley, most celebrated of Mr. Neary's predecessors at Winchester; Britten, who did so much to revivify church music after the war and to represent the present day; Jonathan Harvey, whose *I love the Lord* was new to London.

Harvey wrote the new anthem and its slightly odd companion *The dove descending* on "The Winchester Choir and the great church where they normally sing. In *I love the Lord*, a chord of G major remains at the centre as a point of constant affirmation. Concord becomes discord when other voices move

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OVERSEAS NEWS

Joint U.S.-Soviet stand
dismays Jewish lobby

BY DAVID BELL

WASHINGTON, Oct. 2.

THE LONG-PREDICTED confrontation between the Carter Administration and Israel may now be at hand after the unexpected broad joint U.S.-Soviet declaration on the Middle East at the United Nations.

The reaction of Israel's powerful friends in the U.S. can be expected to be extremely fierce, partly because they have been caught off guard and partly because it has been a key aim of the "Jewish lobby" to stop the U.S. from trying to "impose" a settlement on the Tel Aviv Government whether on its own or with the Soviet Government.

Last night's statement stops well short of any such imposition and involves a number of important Soviet concessions but this will be of no comfort to Israel's friends, however, who have been watching with mounting horror as the Carter Administration's position has shifted closer and closer to that of the moderate Arab States. They fear that even if it is not actually imposed, a solution on Tel Aviv the

in the negotiating process.

Mr. Hoddin Carter, the chief State Department spokesman, moved to defuse some of the anger yesterday, insisting that although the document marks the first time that the U.S. has referred to the "rights" of the Palestinians "these rights are not to be purchased at the expense of Israel." Further, he said, Palestinian rights cannot be considered "separately from ending belligerency."

At the same time, Administration officials noted that the document does not refer to the Palestine Liberation Organisation (with which Israel refuses to negotiate under virtually any circumstances) and leaves deliberately vague any real definition of the phrase "Palestinian rights."

Israel's friends, however, have been watching with mounting horror as the Carter Administration's position has shifted closer and closer to that of the moderate Arab States. They fear that even if it is not actually imposed, a solution on Tel Aviv the

U.S. is condoning a situation in which Israel is progressively isolated diplomatically and estranged from its closest and most powerful ally.

In practical terms the immediate reaction of the Israeli lobby is likely to be a "closing of the ranks" behind the Begin government. The Israeli Prime Minister is already much more popular with American Jews than immediately after his election and the Jewish community will move swiftly to flex its muscles in Congress.

For his part, President Carter fully understands the strength of the Jewish lobby and has two of his key aides working hard to keep in touch with influential Jewish opinion. Yet at the same time it is now clear that he has committed himself to a position on the Middle East that goes very much further than any previous Administration. That has been intermittently apparent for some months and there can be no doubt about it.

Gromyko hints at Summit

BY DAVID SATTER

MOSCOW, Oct. 2.

THE ATMOSPHERE surrounding the Strategic Arms Limitation Talks improved perceptibly with the statement over the weekend by the Soviet Foreign Minister, Mr. Andrei Gromyko, that progress "made" on the "key" issues and that the United States and the Soviet Union are heading towards a new agreement.

Mr. Gromyko's remarks, recorded earlier last week in New York and broadcast on Soviet television on Saturday night, were the most optimistic Soviet statement yet on the future of the SALT II talks, which had been all but dead-ended since the Soviet rejection of two U.S. proposals in March.

On the Middle East, Mr. Gromyko said the Soviet Union continues to stand for a settlement which would protect the legitimate rights of the Palestinians but guarantee the independence and sovereignty of both the Arab states and Israel. He said the Soviet position was made "amply clear" in talks in the U.S. and at the White House. The Soviet Foreign Minister said that as a result of the talks in Washington, the situation is "better to-day than it was yesterday," and that although some questions remain undecided, they are of secondary importance.

In a further indication that the recent talks have improved

West insist that East
admit guilt in Belgrade

BY REGINALD DALE, EUROPEAN EDITOR

BELGRADE, Oct. 2.

DELEGATES from 35 nations were gathered here to-day for the meeting to review the 1975 Helsinki Agreement on European Security and Co-operation in Europe. The talks, which open on Tuesday, are expected to last at least until December, and possibly until February.

The West has consistently made it clear that it will try to avoid "polemics" during the Belgrade Conference, particularly on the sensitive issue of how far Eastern countries have carried out the human rights provisions of the agreement.

Initially, the Western countries plan to restrict their

comments on human rights to broad statements of principle. They will raise individual cases only if the Eastern countries are less than frank in their response or attempt to deny that violations have taken place.

The West, however, must also expect to come under fire from the East. The U.K., for example, is almost certain to face accusations of "human rights violations" in Northern Ireland, and the Eastern countries are expected to raise the general issue of the right to work at a time when the West is still suffering from massive unemployment.

Reports of
100 killed
in Dacca
coup attempt

DACCAR, Oct. 2.

MORE THAN 100 people were reported killed in an abortive coup attempt by dissident Bangladesh troops here to-day as the last of 60 hostages in the Japan Airlines hijack were shuttled to safety in buses from the airliner.

Unofficial reports said 11 air force officers and 17 civilians may have been among those killed when shooting broke out in the airport during the revolt, which started before dawn in an army camp.

A group of dissidents briefly seized the Dacca Radio station to announce a successful coup by the army, navy, airforce, police and students.

But President Zia-ur-Rahman went on the air a few hours later to tell the nation loyal troops had crushed the revolt by "disgruntled elements."

The national capital remained calm, with no visible signs of tension, but a curfew appears to have been imposed and Dacca airport remained closed to all traffic.

The motives for the revolt are not yet clear. Major General I Zia-ur-Rahman, who came to power after a series of coups following the assassination of Prime Minister Sheikh Mujib-ur-Rahman by junior army officers in August, 1975, gave no details in his seven-minute address to the nation this morning.

He said the coup had been staged by "some undisciplined soldiers" backed by vested interests who did not want the country to progress.

General Zia disclosed for the first time that there were similar shooting incidents last Friday in his northern Bangladesh hometown of Bogra, in which several "patriotic soldiers" were killed by rebels and property was damaged, but did not go into details.

U.K. motives in Africa
are suspect says Owen

BY MARTIN DICKSON

DR. DAVID OWEN, in a major reassessment of Britain's policy towards Southern Africa, said last night that the Labour Government must make it unequivocally clear that it was now committed to doing "everything possible" to enable Africans to win their "legitimate rights" in South Africa, Rhodesia and Namibia.

As regards South Africa, the Foreign Secretary said the code of conduct for its companies operating in the Republic was "but one of the pressures for continuing evolution which it is vital for us to apply if a strategy for peaceful change is to be credible and successful."

Hitherto, he said, the South African response to international pressure had been to "shrink at the edges but stick to the fundamentals of apartheid." The minor changes so far registered are totally inadequate to the scale of reforms needed, he told a Young Fabians meeting in Brighton.

Dr. Owen said that if change did not come from within South Africa, the external pressures to

compel it would become irresistible, posing difficult decisions for the international community. In the United Nations, the pressure for mandatory economic sanctions would inevitably grow.

But, he added, a universal ban on trade with South Africa would cause major problems and higher unemployment in British exporting industries—notably in the high technology and machinery sectors—and would disrupt industries at present dependent on imports of South African raw materials—principally chrome, manganese, platinum and other minerals.

"Our economic links with South Africa could not therefore disappear overnight without causing grave dislocation to the domestic economy and having severe repercussions on the level of employment," Dr. Owen said.

"We are living in the real world," he added, "and this is a harsh fact which we have to take into account more than any other Western European country." But he noted that last year,

Strike halts
container
activity in
U.S. ports

By Stewart Fleming
CONTAINER ship operation along the Atlantic and Gulf coasts of the U.S. came to a halt yesterday as Mr. Thomas Gleason, president of the International Longshoremen's Association, called 50,000 dock workers out on strike.

The most immediate impact of the strike is that the U.S. postal service has placed an embargo on surface mail to and from Europe, Africa, South America, the Middle East and the Caribbean. Because the strike is selective and because many container ships moved out of port on Friday in order to beat the midnight Friday strike deadline, there has not been much disruption in the ports so far.

As the coming week progresses, however, the effects of the strike are likely to build up. A spokesman for the Association of American Railroads said that senior executives had decided on Friday not to impose an immediate embargo on rail freight to the East Coast ports because they had found no evidence of congestion. He added that the executives would be looking at the situation again tomorrow.

The strike was called when negotiations over a new three-year contract for the dockers broke down as the old contract expired.

The fundamental cause of the breakdown is understood to be the union's demands for some form of increased or improved job security for dockworkers, particularly those who are losing their jobs because of containerisation. In addition, however, there is speculation that the strong line the union is taking reflects Mr. Gleason's aim of trying to agree a single contract for all the East Coast and Gulf ports.

Currently, groups of ports such as the North Atlantic, South Atlantic and Gulf ports, negotiate separately, but generally follow a pattern set by the North Atlantic agreement.

Army tightens grip on Pakistan

BY SIMON HENDERSON

ISLAMABAD, Oct. 2.

PAKISTAN'S military regime tightened its control over the country this week-end after the martial law ruler, Gen. Zia-ur-Rahman, cancelled the October 15 general election.

About 80 people, mostly supporters of the former Prime Minister, Mr. Z. A. Bhutto, were arrested as potential trouble-makers, and steel-helmeted troops with rifles patrolled the major cities.

In a Saturday broadcast to the nation, Gen. Zia said the election had been put off "to save the country from a dangerous crisis and to place the full facts of investigations into the former regime of Mr. Bhutto before the public" through the civil courts.

A decision on new elections will be taken when these cases are complete, he added.

At the same time, Gen. Zia announced a ban on all political activity, said martial law would be more strictly enforced than hitherto, and that newspapers would have to show far more restraint in coverage of political affairs if they wished to retain their freedom.

Politicians will be allowed to meet on party matters and to issue Press statements, provided they do not criticise martial law, he added.

Retired Air Marshal Asghar Khan, who on Friday announced he was cancelling all engagements for the next few weeks, said he was disappointed by the ban on political activity and the

cancellation of the election.

Gen. Zia has for some time been under pressure from senior army officers to cancel the election and his announcement is seen as something of a capitulation. Diplomats here say these officers, particularly the corps commanders in the provinces, had become exasperated with the General's inability or unwillingness either to quash any chances of an electoral victory by Mr. Bhutto's Pakistan Peoples Party or to overrule the judiciary and push through a quick and conclusive military trial.

In the final analysis, the diplomats say, Gen. Zia was given no choice and may have been left in control purely because to oust him would have damaged the army's credibility.

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Ormeanwhile, back at Whoppingbloomers Ltd Francis the Rep gets out of a very tight corner:

I'd been on the job all day. No, please, do you mind, don't be so common. You see, I travel in Ladies underwear. No, I don't wear it, I've decided—I sell it for a living. No really, have pity, I mean, you should just try flogging great thick bloomers nowadays. Anyway, I'd just got back to the office when the new cleaner came in.

Well, I know it's wicked to laugh, but really she had this, er, enormous, er, bottom. Honestly, it came in the door three minutes after she did!

And, before I could say anything she'd lowered it onto my lap. "Do you mind?" I said, "You're squashing my aniseed balls!"

"Sorry darling" she said, "I'm not that heavy am I?"

You must be joking, I thought, but it was no laughing matter when she said, "Are you getting fresh with me?"

"You should be so lucky" I said, "the air in here's quite fresh enough for me thank you, 'cos we've got the new Advance ESF."

"Who's that, Flash Gordon's uncle?" she said.

"I'll do the jokes if you don't mind" said I. "But since you ask, it keeps the air really clean from stuffiness and smoke, even when the directors are puffing on their big Havana's in the Conference room!"

"I bet you've got a big Havana," she said. Gordon Bennett, she'll have to go, I thought.

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"I'll give you a rise darling," she said. Ignored her coarse remark, and continued, "And the Chairman's wife needn't go mad ordering new curtains and things, 'cos the decor stays cleaner for much longer!"

"Oh stop jawing" she said, "I'm going to clean out Rumbold's drawers!" Oh well, I thought, whatever turns you on, But thank goodness for Advance ESF.

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AUSTRIA AFTER THE ELECTION

The good life is over

BY PAUL LENDYAI IN VIENNA

DESPITE the relative success scored by the ruling Socialist Party at to-day's important regional elections in the province of Burgenland, last week's flurry of speculation against the schilling indicates that Austria is faced with serious financial and economic problems. In anticipation of the forthcoming stringent stabilisation measures, political and social tensions have been rising for some time.

A few days ago more than 6,000 cars blocked the Ring boulevard, cutting off access to

the elegant shopping streets of central Vienna. Displaying transparencies with slogans such as "hand off our cars," the Austrian business community and its political arm, the "Wirtschaftsbund" (one of the three basic organisations of the opposition People's Party) protested against what was described as "the most severe blow against the Austrian economy since World War Two."

The target of the first demonstration staged by Austrian businessmen since the war was a new law on company

taxation and a series of austerity measures prepared by Chancellor Bruno Kreisky's Socialist Government.

The reduction of the wide range of tax-deductible allowances for companies and self-employed professionals is only the prelude to a package of the most drastic austerity measures Austria has faced since the early 1950s. These include the projected introduction of a special Value Added Tax of 20 per cent, instead of the hitherto 15 per cent, on so-called "luxury" goods such as cars, and a variety of consumer

durables, ranging from colour television sets to hi-fi equipment and dishwashers. Social security contributions will be raised, a special levy on transit lorry traffic introduced and income-tax cuts demanded by the unions will be put off for as much as two years.

All this comes as a rude awakening for the 7.5m Austrians, so long accustomed to labour peace, rapid growth and growing affluence and could be reflected in to-morrow's elections in the easternmost province of Burgenland. On the face of it, the economy is still doing fairly well with the real GNP rising by 4 per cent in the first half of 1977, inflation on a year-to-year basis dropping to 5.5 per cent in August and unemployment a mere 1.8 per cent. But the balance of payments deficit and the shortfall in the federal budget have reached immense proportions which pose a threat not only to the exchange rate of the Austrian Schilling, hitherto one of the hardest currencies in the world, but in the long run also to full employment.

The visible trade deficit in January-July jumped by 29 per cent to a staggering Sch38.9bn. (£1.3m) and may be well over Sch60bn. by the end of the year. Worse still, net receipts from tourism were only up by 3 per cent and the current account deficit almost doubled to Sch21.9bn. Foreign exchange reserves dropped by Sch3.6bn. Austria's external indebtedness has roughly doubled to Sch109bn. during the past three years.

The sudden deterioration of the balance of payments current account has been partly due to the fact that Austria's Socialist Government has succeeded too well in combating the danger of recession in 1974-75. Motivated partly by electoral considerations, the Socialist Government in those years and the Socialist dominated unions created a situation in which despite a 2 per cent fall of the GNP, nominal wages jumped by 14 per cent in 1974, 1975 and 1976 tax revenues were respectively 5, 10 and 3 per cent below projections, but expenditures during the same period were 5.7 and 9 per cent up on the targets set by the voted budgets.

The projected measures should erect a protective wall for the domestic producers and stimulate the much-needed redeployment of productive capacities. It is for the first time in its seven and a half year long reign, Austria's Socialist government has had to tell the population that it is living beyond its means, that a belt-tightening has become inevitable.

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HOME NEWS

Scope for big tax cuts forecast

By Michael Blanden

THE GOVERNMENT will have scope for substantial tax cuts over the next few years, according to the latest monthly review published by Messel, stock-brokers.

Their calculations show that on present tax rates and spending plans, the Budget deficit is likely to drop sharply, moving into surplus by the 1980-81 financial year.

The reflation package which the Chancellor is expected to announce shortly is likely to be on a relatively modest scale, keeping the public sector borrowing requirement for the current financial year within the £8.7bn ceiling.

Next year, however, the Budget deficit will come down to £4.3bn, the brokers forecast, and in 1979-80 it will drop to £2bn. By 1980-81, on unchanged tax rates and spending, there would be a surplus of £2.7bn.

In other words, the brokers say, "there is scope for tax cuts with jeopardising the recent improvement in the Government's finances." If the projections were correct, "some radical possibilities are opened up for the gilt-edged market."

Report on beer 'contains errors of fact'

BY KENNETH GOODING

MANY CONCLUSIONS in the Price Commission's report on beer are "totally misleading and potentially seriously dangerous not just to the brewing industry but to industry as a whole," says Mr. Colin Mitchell, of stock-brokers Buckmaster and Moore.

If the incorrect conclusions in such reports are to be acted upon, the effect on the U.K. economy could be very harmful.

Mr. Mitchell, the only stock-broker to be asked for evidence when the Price Commission was preparing its report, has sent a further submission to the Department of Prices.

In this, he says that the Price Commission's original terms of reference enabled it to ignore vital aspects of the brewing industry's activities. Insufficient time was spent on the preparation of the report, resulting in numerous errors of fact.

If the report is used as the basis for a freeze on the price of beer it could:

• Damage future and essential investment plans;

• Raise unemployment in industries supplying the brewers and in the brewing industry itself;

• Lead to the demise of many small brewers which have as great a need as others for price increases to help finance investment;

• Result in many public house closures, especially in small communities.

Mr. Mitchell says in his submission to the Department of Prices, that the implication in the Commission's report that the big brewing groups spent large sums with reckless abandon on a variety of highly dubious projects was "highly damaging and totally false."

If the companies had not invested in modernisation, replacement and the building of breweries and auxiliary facilities "prices might now be slightly lower but ultimately the brewers would have been obliged to make such investment — and capital costs have risen eight-fold in the last 15 years."

Thus, if the brewers had not had the foresight to invest when they did and simply waited until their plant and equipment was beyond repair, the consumer would have been forced to pay substantially higher prices than he is now paying.

Butter stocks rise in U.K.

FINANCIAL TIMES REPORTER

LARGE STOCKS of butter will build up in British stores over the next few months as Danish, German, Dutch and French exporters seek to beat a January 1 deadline for the ending of a Common Market subsidy worth £145 a tonne to them for all the butter they send to the U.K.

Experts in the trade estimate that by the end of the year stocks will reach 250,000 tonnes—double the normal figure and equal to nearly six months' butter consumption.

It is suggested that this move will be good for Britain as it will defer for several months a 7p a pound price rise for butter, which would otherwise have come as a result of Britain's final move into full membership of the Common Market.

Compensation

The subsidy has been paid to compensate EEC exporters for lower prices in Britain during the five year transition period. It is ending because the manufacturing price for U.K. butter goes up by £145 a tonne when the transition ends on January 1.

In theory, this will bring U.K. butter prices into line with the rest of the EEC. In fact, they will still be about 30 per cent lower because the "Green Pound"—the EEC's exchange rate for translating common farm prices into sterling—will still be much overvalued.

So the EEC exporters will get subsidies to cover the difference on all the butter they send to the U.K. — keeping butter prices down here at least until Mr. John Silkin, Farm Minister, allows some devaluation of the "Green Pound," probably in a late spring.

In any case, butter prices will start to go up later in the year as the stocks now being built up are consumed. And they could be pushed up even more unless the EEC agrees to continue the 81p per pound subsidy fought for by Mr. Silkin during the last farm price talks.

The change to full membership could bring chaos to Britain's dairy industry, faced with increasing milk production and falling consumption of both butter and milk.

Consumption could fall further if the price of the doorstep pint of milk goes up to 13p next January with the ending of the special subsidy.

U.S. 'heads for further recovery'

THE U.S. economy was heading for continued recovery, with the annual rate of real growth expected to be about 4 to 4½ per cent, a leading U.S. bank economist said yesterday, writes Michael Blanden.

Mr. Norman Robertson, chief economist of the Mellon Bank, admitted that the economic upturn had moderated.

But the prospective growth was a healthy sign, since the economy could not have sustained its previous pace without risking a new boom-bust cycle of business activity.

The expected expansion rate was a move back towards the economy's longer-term growth potential of 3-3½ per cent, a year. The picture was far more hopeful than indicated by the over-pessimistic reactions in the U.S. recently which had suggested that the country would soon hit a new recession.

Home improvement funds distribution 'unfair'

BY MICHAEL CASSELL, BUILDING CORRESPONDENT

THE REGIONS located furthest from London are receiving less than their fair share of home improvement funds, according to a report published to-day by Shelter.

But London needed "every penny it is receiving and more," according to the report which is opposed to reducing the capital's housing expenditure to the levels operating in the regions.

There should be, instead, a threefold increase in improvement expenditure concentrated in the deprived districts of Wales and the North.

Last week, Mr. Reg Freeman, Minister for Housing and Construction, acknowledged that improvement work should be given even greater priority.

The Shelter report says: "The further you go from London the less money for improvement you

seem to get. Although the north west and Yorkshire and Humberside each appear to have a greater need for improvement funds than London, the capital is receiving £280m, while the north is getting only £98m. Yorkshire and Humberside is receiving £62m."

The report also claims that while the Government is suggesting that in many areas the housing shortage is over, there is a continuing need to build more homes in every county in England.

It claims that while the Government says the housing shortage has been solved in Northumberland, Cornwall and Norfolk, it has figures to show that over 80,000 homes will be required in these regions over the next decade.

Housing Crisis Nationwide; Shelter Publications, 137, Waterloo Road, London SE1 8UL; £1.

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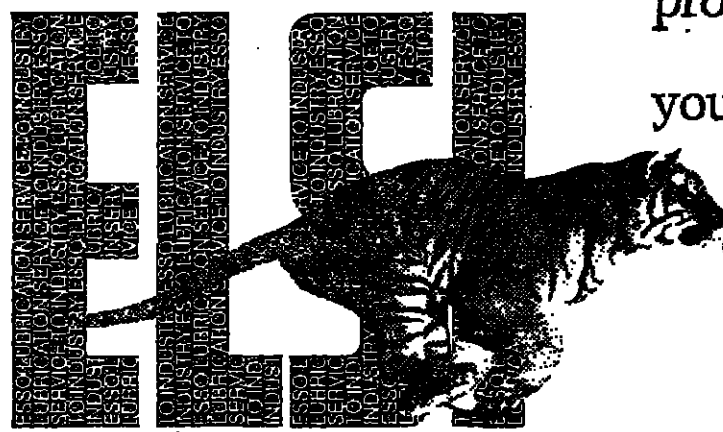
By agreement between the plant's lubrication engineers, ELSI specialists, and the machine tool designers and manufacturers on the correct Esso lubricants to use, the frequency of application, and oil change periods for each machine.

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مكتبة

Butter
stocks
rise
in U.K.

£1bn. tax relief is possible brokers claim

BY MICHAEL BLANDEN

THE GOVERNMENT could give an extra £1bn. of tax relief through higher personal tax allowances in the expected economic package, says stock-brokers Phillips and Drew.

The brokers also suggest in their latest economic forecasts that the Government could approach the International Monetary Fund next month to re-negotiate the monetary ceilings for next year.

Given the improvement in the U.K.'s financial position since the end of last year, "it seems likely that the IMF would agree to some reformulation of this restriction acceptable to the Government."

In return, the Government might refrain from drawing in further tranches of the IMF credit facility.

Given a successful outcome to the IMF discussions, "it seems likely that some measures to alleviate unemployment will be announced before Christmas."

These could include further job creation and retraining schemes and some extra public spending on capital projects to be met out of contingency reserves.

The Government could be tempted to go much further. The Chancellor could inject more than £1bn. into the economy by making full use of the regulator to cut indirect taxes.

More likely, would be a cut in VAT rates to 8 per cent, and 10 per cent to cost £500m.—this would be enough on the brokers' forecasts to bring the year-on-year inflation rate down to single figures in the second quarter of next year.

But they believe that the Government would prefer to cut direct taxation further.

Looking at the pay prospects, the forecasts indicate that pay rises will increase to give settlements this winter in the 15-20 per cent range and that the increase will continue through next year as demand tightens.

Given this increase, the Government might feel it could reflate the economy further in the Budget next spring. This could involve a £1bn. cut in direct taxes—including the indexation of allowances—partly offset by a modest increase in some excise duties and corporate taxation to leave a net figure of £250m.

Some casual building workers 'unavoidable'

BY JAMES McDONALD

TOTAL DECASUALISATION is impossible in the construction industry, says Mr. Reg Prentice, former Labour Overseas Development Minister. The aim should be to "limit the casual element as far as possible and stabilise conditions to the mutual benefit of employer and employee."

Mr. Prentice writes in National Builder, Journal of the National Federation of Building Trades Employers, that the Trades Union Congress is an "avowed protagonist of decasualisation"

in the industry, while the Federation, rightly in his view, does not believe total decasualisation possible.

It was "realistic" of the employers to favour efforts to improve employment stability.

Mr. Prentice, MP for Newham North-East and Minister of Works in 1964-66, adds: "I do not believe that some degree of casual working in the construction industry is avoidable, nor do I believe that it is as harmful to those involved as its critics claim it to be."

New insurance rules follow EEC pattern

FINANCIAL TIMES REPORTER

NEW REGULATIONS imposing requirements of the EEC on solvency margins of insurance companies have been published by the Department of Trade.

Under the EEC directive last year the solvency rules are to be introduced by July 1978. Rules implementing EEC requirements on classification of risks by U.K. insurance companies take effect at the New Year to pave the way for the solvency measures.

These regulations are the first big step toward a European common market in insurance. They are not expected to have a large impact on U.K. companies.

The industry says its present solvency margins are sufficient to avoid difficulty in meeting the EEC rules, which in general terms impose a 16 per cent margin.

Under the January 1 regulations, the present six U.K. classes of general insurance business will be replaced by the 17 set out in the EEC directive.

The existing solvency regulations will be replaced from July 31 by rules requiring a British company to maintain a margin based on the higher of two sums calculated by reference either to its premium income or to its record of claims.

Three oil groups set up new medical service

BY RAY DAFTER, ENERGY CORRESPONDENT

THREE OIL groups have joined Aberdeen University to establish an offshore medical services company.

British Petroleum, Esso and Shell—each of which is heavily committed to North Sea oil development—will be the industry partners in the venture.

The new company, Offshore Medical Support, will offer a medical service to the offshore industry including diving operators, BP (50 per cent.), Shell (25 per cent.) and Esso (25 per cent.) will make a total investment of £100,000 as initial financial support for the venture.

The money will be used to provide specially designed premises which will belong to the university and which will be built on the Forresterhill site, Aberdeen.

Any profits made by the company will be available to the Institute of Environmental and Offshore Medicine for further development of the training and research divisions.

ONE of the U.K.'s largest oil module fabrication yards is to be mothballed before the end of the year.

John Brown Engineering-Offshore's £2.5m. yard at Clydebank has no prospect of orders in the short term, and the company has decided to pay off the remaining 500 workers in the next two months.

John Brown said it could not foresee any improvement in the module-building market over the next 12 months, despite the recent go-ahead with development of the Murchison and Tartan fields.

Tanker rates improve but outlook is pessimistic

BY OUR SHIPPING CORRESPONDENT

IN SPITE of a low level of business in world tanker markets in the last week, chartering rates improved in some areas.

The tanker index, compiled by the Tankers (shipbroking) firm, rose three points to world-scale 61. This index is based on new single voyage firings for dry cargo and similar rates already in operation.

Shipowners are not, however, displaying much optimism. The amount of tonnage laid up or idle continues to climb and is this week put in excess of 41m. deadweight tons. A critical factor in coming weeks will be the degree of oil consumption by those countries dependent upon it for winter heating.

Rates for very large crude carriers (VLCCs) out of the Arabian Gulf last week were a little better, reaching world-scale 24. No fixtures of ultra large carriers (ULCCs) were reported, but the rate forming the basis of negotiation remained unchanged at world-scale 19.

Mediterranean rates continued to show improvement, with 60,000 tonners for Atlantic voyages reported fixed at world-scale 60 and slightly larger vessels around world-scale 50.

General Cable International N.V.

Guaranteed Floating Rate Loan Notes 1980

In accordance with the provisions of the above Notes, Irving Trust Company, as Fiscal Agent, has determined the Rate of Interest payable with respect to Coupon No. 15 on Friday, March 31, 1978 to be Eight and One-eighth per cent (8 1/8%) per annum.

Irving Trust Company,
Fiscal Agent

October 3, 1977

LABOUR PARTY CONFERENCE PREVIEW

Heffer fears attacks could split Labour

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

A WARNING that the campaign against the Labour Left-wing about attempts to be made later this week to remove Left-wingers from the party's national executive. This would be given yesterday by Mr. Eric Heffer on the eve of the Labour Party conference.

At the pre-conference Tribune group meeting in Brighton, Mr. Heffer, MP for Liverpool, said that the campaign—beginning earlier this year against party—could broaden into a witch-hunt against the entire Left.

He was particularly concerned about attempts to be made later this week to remove Left-wingers from the party's national executive. This would be given yesterday by Mr. Eric Heffer on the eve of the Labour Party conference.

The MPs on the platform were unhappy at the Lib-Lab pact, demanded reflation to bring down unemployment, called for further defence cuts, and wanted the conference to approve procedures to allow the constituency parties to re-select their MPs at regular intervals.

Left attacks Mrs. Colquhoun

BY IVOR OWEN, PARLIAMENTARY STAFF

MRS. MAUREEN COLQUHOUN, Tribune Group treasurer, denounced by her Northampton North constituency Labour Party last week, came under attack from Labour Left-wingers at Brighton yesterday.

Supporters of the campaign to gain increased powers for constituency parties so that they can give sitting MPs notice to quit, angrily shouted their disagreement when she complained that the action taken against her in Northampton was a denial of natural justice.

Describing herself as "MP for Northampton just," Mrs. Colquhoun recalled that she had been an active supporter of the Campaign for Labour Party Democracy and its central aim that all Labour MPs should be subject to a mandatory reselection process by their constituency parties during the lifetime of each Parliament.

An examination of the voting figures in Northampton Labour Party would show that the decision to "dismiss" her was not fully representative, she said.

"After my experience in Northampton, I really feel I must say I do not feel that accountability is proper in what is a dying Labour movement."

Mrs. Colquhoun's words were almost drowned by disapproving shouts and she was later accused by Mr. Ted Knight, prospective Labour candidate for Hornsey, of insulting the meeting by going to the platform to defend the position of non-reselection.

Strong support was expressed for the view of Miss Joan Maynard, MP for Sheffield Brightside and a member of the Labour NEC, that a firm decision should be taken at this week's conference in favour of the principle of mandatory reselection for all Labour MPs.

There were repeated promises of support for the attempt to be made at the Labour Party conference today to get a specific vote on the immediate implementation of the principle.

Labour EEC critics again reject direct elections

BY PHILIP RAWSTORNE

MR. PETER SHORE, Environment Secretary, and other leading Labour critics of the EEC, yesterday reaffirmed their strong opposition to European direct elections.

Their attitude suggests that Mr. James Callaghan, Prime Minister, will again face serious difficulties in trying to push the Government's legislation through Parliament next session.

Neither Mr. Callaghan's statement on the Government's EEC reform policy, nor the importance attached to the issue by Liberals as a test of the Lib-Lab pact, appear to have weakened the hostility of Labour anti-Marketters.

Mr. Shore, speaking at a meeting in Brighton of the Labour Common Market Safeguards Committee, said that with direct elections the Strasbourg Assembly could not "help but become an instrument for the propagation of European union."

"All the more reason, therefore, why it should not be allowed in its functions and powers to challenge the authority of national parliaments; why it should never become a legislature but always remain a consultative body."

The safeguards committee, in a statement on the Prime Minister's letter to Labour's National Executive, demanded that Labour Ministers and MPs should be allowed to retain their right to a free vote on European direct elections.

Welcoming Mr. Callaghan's reference to increased Parliamentary control over the EEC, he called for the amendment to session of the European Communities Act to restore the minister's power to reject a legislation from Brussels.

Transformed

Mr. Shore, repeating his view that British membership of the European Community should be challenged again in Parliament, made it clear that he believed the entire shape of the EEC could be transformed if the reforms outlined by the Prime Minister were implemented.

The powers of the EEC Commission and the European Court should be contained or reduced. "They had powers of policy initiative, and of decision-making in the hands of commissioners and judges who have no responsibility to the British Parliament or people," he declared.

Enlargement of the EEC would help the move away from European union, Mr. Shore claims. If the EEC were to include Greece, Portugal, and Spain, it would be difficult to believe that "our old friends in EEC" would not arise.

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Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

METALWORKING

Treatment plant made to measure

MODULAR heat treatment plant called the Valfurn system, designed by ICI's Cassel Heat Treatment Specialists, has been selected for installation in the Transmission Bearings Division and marking the first introduction of this novel plant to the U.K. engineering industry.

Valfurn, a system developed by ICI after detailed discussion with the engineering industry, offers versatility, reliability, and is easy to assemble.

Initial capital costs are low, and because the units are standard, the basic installation is capable of simple up-grading as production requirements develop.

Upgrades may include an automatic robot hoist to meet the highest standards of environmental control. The robot provides an effective solution to many component handling problems in the heat treatment industry. A compact, self-contained conveying unit capable of horizontal and vertical movements, it ensures efficient "point-to-point" transfer of components through the various heat treatment stages.

Makes heat exchangers

SUBSTANTIAL SAVINGS in production time and cost, and an improved product, has been achieved by Senior Platecoil following the installation of a computer controlled seam welding plant for the manufacture of plate-type heat exchangers.

Previously these were made by deep pressing the plates to form the media channels, then welding the two halves together. These units are normally used as an immersed steam or coolant element to heat or cool liquids in vessels.

They can also be fabricated in heavy gauge materials to form jacketed vessels which can be clamped to the outside of vessels.

The new plant, basically to a design by Tranter Inc., of Lansing, Michigan, U.S., but modified by Senior Platecoil to take computer control, was built under licence from the American company, and installed at a new factory at Milton Keynes.

The machine can take 14 or 18 gauge sheets of steel, or 12 or 14 gauge mild steel sheets. The computer controls the seam welding head (a form of resistance weld-

ing) to weld the plates together to produce a pre-set watertight pattern.

Pipe entries are welded into the flat plates, and are used to introduce water under pressure (around 100 psi). The heat exchangers are expanded into shape in a fixture. After the hydraulic expansion is complete, the exchangers are subjected to a pressure test to ensure there are no pinhole leaks in the pipe welds.

The company says that this expansion method eliminates press forming stresses and thinning of material, and that design changes give improved performance and resistance to scaling—scale which does form in water to remove. Condensate collection is faster, and the design allows 19 per cent more wetted surface area than the press formed version.

The improved production method has enabled the company to cut the cost of the heat exchangers by up to 30 per cent, and to cut delivery time (in some circumstances) to 48 hours.

More from Senior Platecoil, Otterspool Way, Watford, Herts., (Watford 26091).

CONFERENCES

Handling a big project

THE vast amount of preparatory work that was needed before embarking on the Thames barrier project at Woolwich, part of the Greater London Council's overall flood prevention scheme, is to be revealed at a symposium at the Institution of Civil Engineers in London on Wednesday (October 5).

The symposium is being held by Rendell, Palmer and Tritton, consulting engineers, who designed and construction supervision of the project, and will cover

environmental considerations, model testing, river surveys, geotechnical investigations, economic evaluations, preliminary designs, and final designs. Sixteen speakers will be presented for discussion by engineers, architects and specialists who have been closely involved in bringing the barrier to the construction stage. Details of the symposium can be obtained from Mr. R. C. Draper at Rendell, Palmer and Tritton (01 828 8899).

The Manpower Employment Organisation (MEO) invites Bidders to submit sealed bids by quoting a percentage discount individually on each group of items, as provided for under Articles 4, 5, 6, 7, 10, 14, 15, 16 etc. of P.D. 475/76 "re the implementation of L.D. 1266/72 concerning the execution of Public Works" (Govt. Gazette A.172/76) for the selection of a Contractor who will carry out the building works and the electrical and mechanical installations of the Adult Vocational Training Centre (KEKATE) and Apprenticeship Centre (K.M.) located in SERRES of a total value, according to the last estimate of the design, amounting to Drachmas 116,500,000 under the following terms and conditions:

1. The Bidding will be held on the 15th day of November, 1977, and from 10.30 hours (latest delivery time of bid by the bidder) simultaneously in the Athens MEO Special Office for the Implementation of the KEKATE Project, located at No. 8, 3rd September Street, and in the other MEO appropriate offices, located at Serres, 2 Dem. Floria Street, before appropriate committees, that will carry out the bidding up to, and include, the review of the bids.

The selection of the successful Bidder will be made by the Athens Committee on 5th December, 1977, at 11.00 hours in the Athens MEO Special Office for the 2nd Education Project, located at No. 8, 3rd September Street.

2. Participation in the Bidding for the execution of works financed by Public Investments Programme funds is open to:

(1) Firms of contractors in possession of the "Special 5th Class Contractor's Licence" for the execution of Reconstruction Works.

(2) Foreign Companies or enterprises, whose main offices are located in member-countries of the International Bank for Reconstruction and Development or in Switzerland.

3. To participate in the Bidding, the bidders shall submit a Bid guarantee amounting to Dr. 2,330,000, i.e. an amount equal to 2% of the total estimated cost of the works, in accordance with the provisions of Article 5 of L.D. 1266/72 "re the execution of Public Works" and same of Article 4 of the P.D. No. 475/76.

4. Participants may take cognizance of all relevant bidding documents and how to acquire them (i.e. drawings, diagrams, etc.) and obtain the necessary forms for completion and submission of their offer, by applying to the MEO appropriate Service, as defined in term No. 1 above, on dates and hours open for the Public.

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SECURITY

Glass stops rifle bullets

ALTHOUGH the 7.62 Nato rifle will kill a man a mile away a British company has succeeded in making bullet-resistant glass that will stop three shots from this rifle fired from a range of 10 metres. It can also withstand three shots from a .9mm hand gun at three metres.

Tudor Safety Glass Company, a Division of Doulton Glass Industries, is producing Royal Doulton Vynlex glass to specific requirements for security situations all over the world and is the first British company to be awarded the British Standard kite mark for bullet-resistant glass.

BSI has issued its BS.5051 which defines the requirements necessary for bullet resistant glazing materials. The range, number and pattern of strikes are strictly specified. As well as full protection from the projectile, the standard lays down that the glass should protect personnel against injury from splinters that might be ejected from the rear surface when the glazing is attacked. Before passing all the tests the samples have to be exposed to the weather for a minimum of six months to ensure that there is no deterioration.

Vynlex security and bullet resistant glasses comprise various laminates of glass thicknesses permanently bonded together with reinforcing layers of polyvinyl butyral. A laminated glass combines the security advantages of plastics with the non-abrasive properties of monolithic glass, and it has the normal clear and undistorted vision which enables people to carry out their normal daily routines secure in the knowledge that they are fully protected.

Provided the glasses are properly glazed, experience has shown too that Vynlex security glasses withstand explosion blasts. Laminated glass has a superior performance to any other glass of equivalent thickness in an explosion. The tough polyvinyl butyral interlayer absorbs the blast by flexing but the adhesion between it and the glass is such that the laminated glass will not shatter into the jagged shivers which are the cause of so many casualties in bombing situations.

More from the company at Queenborough, Kent ME11 5BB, 079 586 1161.

PROCESSING

Postforms the edge

MELAMINE LAMINATE surfaced worktops can be manually postformed on the edges with a machine developed in West Germany by Anthon and Sons, of Flensburg.

Three sizes are available, to take worktop lengths of 2200, 3700 or 4200 mm, in a width range up to 1200 mm. The worktop is clamped to a blackboard by a 90 to 90 per cent under-curved melamine laminate allowing sufficient overlap to form the edge, and with the board already

An infra-red heating unit softens the laminate which is then bent to shape by forming bars, over the pre-glued edge. Quadrant, semi-circular, and double radius return profiles can be formed to a maximum depth of 65 mm. Heating and curing times are pre-set, and a hooter indicates when each operation is complete.

Without this the melamine would take about three months to cure. Output is about 10 worktops, 10 m. compared with 50/hr on an automatic edge forming machine, but the maker says that at a fifth of the cost of the machine, it should be of interest to small fitters and contract

Details from the U.K. agent, German Machinery Sales, 1798a High Road, Westminster, London, N20 0J 446 4111.

COMMUNICATIONS

Warns of leaks in cables

MOST OF the Post Office's long-distance telephone network cables are pressurised, to keep out moisture and when one of these cables may be carrying up to 97,200 circuits it becomes essential that the location of any cable sheath faults be plotted quickly and accurately.

Fortronic (File) has been awarded a contract worth almost £100,000 to manufacture a cable leakage system which can monitor up to 238 pressurised sensitive conductors spaced at 100 m along a cable route up to 330 km.

The conductors are fitted in the repeater cases which, on 60 Mhz systems, are situated at 1.5 km intervals and they are set to operate when the air pressure drops from its initial setting of 162 kPa to below

150 kPa. Because of the high electrical resistance of the cable a puncture in the sheath produces a pressure gradient rather than an air flow. The time that elapses between the operation of the first conductor and the next and between the second and third can be used to give a first order location of the leak by graphical means. A typical accuracy is ±50 metres.

The Fortronic system, which is designed by the Post Office Telecommunications Development Department monitors the state of the pressure conductors along the route and presents all the information required for leak location at the terminal stations. This information consists of the data and time at which a par-

allel cable is detected, the time taken for the signal to reach the terminal station, and the time taken for the signal to reach the next terminal station.

Further from Fortronic (File), Holden Way, Donibristle Industrial Estate, Dunfermline, Fife KY11 5JW, Dalgety Bay (0383) 823131.

By agreement between the Financial Times and the BBC, information from The Technical Page is available for use by the Corporation's External Services, as source material for its overseas broadcasts.

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Processing of blood samples taken by the Metropolitan Police for alcohol analysis could be speeded up considerably with the Vickers equipment shown here, now under evaluation at the police Forensic Science Laboratory. Each year, this centre handles an average of over 21,000 blood samples and well over 40,000 analyses are performed since each specimen is analysed at least twice. To handle this heavy work flow, laboratory staff are considering the use of the bar code reader terminal above, developed by Vickers Engineering design and projects division. This interprets bar code identifiers carried by a paper label on each sample which allows samples to be identified as they are tested in batches of 30 in a chromatograph. The data is analysed by computer and a file printed out for court use.

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SERVICES

Pipework analysed

BUREAU routines that enable advanced finite element techniques to be used to determine deformations, loads and stresses in pipework and pipelines are available from the Applied Engineering Division of Seicon Computer Services.

Following an agreement with Computas, Seicon has rights to the Norwegian SESAM 89C (Super Element Structural Analysis program Modules) package which is capable of analysing even the largest of structures.

Users are offered analysis in a remote processing basis, or directly on-line to the computer via terminals at Seicon offices throughout the U.K., or terminals installed on customer premises.

SESAM is based on two concepts known as the super element technique, and automatic mesh and element generation. Super elements allow the user to build up his model from groups of elements. These can be combined, orientated and redefined in any manner the engineer wishes to produce the desired model simply and effectively. Up to ten levels of super element assembly are possible.

Automatic data generation is an integral part of the programs, allowing the user to produce a three-dimensional mesh for which elements are automatically provided for a number of semi-independent programs.

Seicon on 0905 585956.

By agreement between the Financial Times and the BBC, information from The Technical Page is available for use by the Corporation's External Services, as source material for its overseas broadcasts.

By agreement between

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Laurence Brookes, Arthur Smith, Ray Slaughter

BICC-people who make things work

A lunchtime drink provides three BICC Globetrotters with a rare opportunity to swap anecdotes about their hobbies — and to talk of the business challenges that have taken them across the world.

Laurence Brookes talks of rugby — his disappointment at missing Saturday's rugby match and his club St. Helens in triumph — and of Indonesia, the reason for his absence. He outlines the major logistics problem that has taken him to Indonesia — the supply of labour, material and equipment to no less than a dozen sites in the country where a BICC team is installing a \$54 million telephone network. He talks of personal pressures — particularly pressures of time, getting the right plant and equipment to the right site when it's needed — and of the challenge of maintaining effective liaison.



Expert training and supervision by expatriate BICC staff enables unskilled labour to play a major part in installing BICC cable for Indonesia's telephone network.

Ray Slaughter talks of the future — of a new technology which is about to revolutionise communications. For Ray, a research physicist, has devoted the last seven years of his life to work on optical fibre cables, as part of an eleven-man team, whose research has contributed to the world's first commercial installation, in a cable television distribution system, of this unique type of cable.

Ray tells of his travels, investigating suitable qualities of fibres and working towards international standardisation of the new materials.

Yet he still finds time for his hobby — photography. As he points out, his 'portable' hobby goes with him on his business trips, and his photograph album is worthy of any world traveller.

Arthur Smith turns the conversation to D.I.Y. — puts forward some novel designs. But his colleagues, more interested in his activities overseas, enquire after India and Indian Cables (Incab), with which Arthur has been connected since the early 1960's when he helped to design, and commission the thermoplastic cables plant. They question him about the progress of the Continuous Catenary Vulcanising plant which will reduce the dependence of Incab on imported paper and lead. They ask of the projects for which he is responsible in Pakistan, New Zealand and Australia and the contribution he is making to building the cable manufacturing capabilities of those countries.

Laurence, Ray and Arthur; rugby player, photographer and D.I.Y. enthusiast. Three of the 54,000 people worldwide who work for BICC — and make things work!



Main cable plant of the Indian Cable Company Limited (Incab), at Jamshedpur.

The BICC Group is diverse; one of the world's foremost cable manufacturers and designers; but also deeply involved in the refining and fabrication of metals; heavily committed to research and development in new communications technology; with a major stake in civil engineering and contracting through Balfour Beatty, a BICC company; possessed of hard-won skills in tunnel design and construction; and railway electrification; with specialist expertise in industrial plastics, electrical accessories, capacitors, printing plates... One thing makes it all work. One thing makes BICC a stable, successful, growing company that competes successfully in so many different markets.

The quality of its people. Highly trained people committed to getting things done — better than before — for the benefit of all of us.

This booklet tells something of the range of skills of BICC and its people, something of their achievement, and indicates a great deal about their promise for the future.

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Optical Fibres... television pictures via glass fibres slimmer than a pencil point.



Laurence Brookes



Makes it work

Building and Civil Engineering

Nigerian road . . .

SOMETHING in the region of £11m. worth of road contracts will be tendered for on completion and acceptance of two major design contracts now in the hands of Fawcett and Partners, London-based firm of consulting engineers, working in close cooperation with Fawcett-Okeke, their Nigerian partner-ship.

The Nigerian Federal Ministry of Transport has just awarded a contract for the design of a 585m. dual carriageway motor

road, 12 km. long known as the Warri By-Pass Project. It skirts the township of Warri and will be carried along much of its length on elevated structures over tidal swamps and navigable waterways.

Fawcett-Okeke a few weeks earlier had been awarded the contract to design the 580m. Warri-Benin road project for which tenders should be called early in 1978. For the Warri By-Pass, expectations are that the call will come during the first half of next year.

. . . and truck plant

WIMPEY has just been awarded a £10m. contract by Steyr-Nigeria for the construction of a major commercial vehicle plant.

Steyr-Nigeria is a company formed by the Federal Military Government and Steyr-Daimler-Puch AG of Austria.

Primary recipient of the award was George Wimpey and Co., Nigeria, and the project is to build the plant at Bauchi in Northern Nigeria. Work is starting immediately and the intention is to complete the installations by November next year.

The project entails the construction of the production

buildings, access roads, foundations and slabs for administrative buildings, water supplies and mechanical and electrical services.

Wimpey already has a separate contract for site preparation.

Meanwhile, back in Britain, the company has announced the winning of a contract worth £1.4m. for the construction of married soldiers' quarters at Woolwich under an award from the Department of the Environment's Property Services Agency.

Work begins on site this month and is to be completed in April, 1978.

Variety of contracts

ORDERS around £3m. have been received by Rush and Tompkins. The largest order, valued at £1m., is for the construction of 73 dwellings at Sherborne Street for the Borough of Islington.

The dwellings, in 2 to 3 storey blocks, will be in load-bearing brickwork with reinforced concrete floors and tiled timber pitched roofs.

The construction of a motor transport workshop for the Borough of Hackney, valued at £560,000, comprising machine shop service bays, administration building and welfare facilities, will commence shortly.

Christian Salvesen has placed an order valued at £80,000 for a three-storey administration building at Borehamwood, Herts.

The Scottish region of Rush and Tompkins has started work for the Department of the Environment constructing a drum dynamometer laboratory at the National Engineering Laboratory at East Kilbride.

At Billingham, Cleveland, the Agricultural Division of ICI has instructed the north-east regional office of Rush and Tompkins to construct a new maintenance building together with altera-

tions and extensions to the control room at the Nitram 3 plant.

Work already being carried out in the north-east includes a supermarket for the North Eastern Co-operative Society at North Ormeau, a workshop for C. Herring and Son at Hartlepool and warehouse and office accommodation for W. J. Lowcock at Middlesbrough.

In the South-West the Bristol office has started work on two jobs for the Bristol City Corporation valued in excess of £4m.

Meanwhile, new civil engineering orders totalling £1.5m. have been won by Reed and Maitland, the recently acquired subsidiary of the group.

Among them is a £670,000 contract from Dumfries and Galloway regional council for widening and reconstructing the A74 Carlisle-Glasgow trunk road, plus one for the construction of the Holystone bridge, on the A702.

Construction of a peripheral road, together with retaining wall, in Wilford Street, Nottingham, is for Nottingham City, while reconstruction of Herne Hill Station, South London is for British Rail.

McAlpine's £4¼m. rail awards

WORK is about to start on a £3.7m. station and its approaches for the Tyne and Wear Transport Executive.

Sir Robert McAlpine, who has just announced the contract for the construction of the new Shields Road station in Scotland Street. This work is worth

Pipework in Sharjah

TWO AWARDS to the Sharjah region of Tarmac International, calls for 7 kilometres of sewers and worth £1m. together, are for extensive pipework.

The larger is for extensions to the main drainage scheme on which the company has been

involved for several years. It is to be air-conditioned and served by lift and escalators leading to the track some 10 metres below ground level.

Architects are L. J. Couves and engineers Mott Hay and Anderson.

Completion is for late 1979 and the station will be on Argyle Street, Newcastle-upon-Tyne, returns to the Glasgow Underground Railway for the first time since 1891 with a contract for the construction of the new Shields Road station in Scotland Street. This work is worth

£250,000.

Power and water in Oman

TO RUN over a period of close on 20 years, a vast power and water development programme for the Sultanate of Oman is to be planned by three British consulting engineers.

Preece, Cardew and Rider, group leaders, will undertake the development of plans for the power systems and sea water desalination.

Sir M. MacDonald and Partners will be responsible for water resources development and distribution, including civil works.

Rendel, Palmer and Tritton will act as consultants for all civil engineering works associated with the development.

The climate of the Sultanate can only be described as arid and yearly precipitation is only about 100 mm. It seems therefore likely that most of the water for the state's 2m. inhabitants will be derived from desalination plant in one form or another. Oman has been exporting crude oil since 1967, but has no refinery and has to import processed fuels.

The largest piped water systems is in the capital area, supplied by pipeline from wells in the coastal area and a desalination plant.

Power for the capital is generated by a diesel plant and a steam power plant.

Planning is to take place in three stages. The first will determine the most economic development programme to meet power and urban water needs up to 1980 and implement approved projects accordingly.

Stage Two is for 1981 to 1985, again for urban power and water needs, but under it it will be considered a broad plan for the remainder of the project period.

In Stage Three, a considerable amount of drafting work is foreseen to prepare recommendations on improvements in the legislation, structure, organisation, finance and operations of power and water systems in the capital and a number of other centres.

No one can at present give an idea of the total cost of the project, but power and desalination schemes as well as extensive water and power distribution systems will not be cheap to install.

Mowlem jobs up North

A GROUP of contracts worth more than £2.5m. has been won by Mowlem Northern of Hareford, Leeds.

The biggest, worth £1.1m., includes 91 dwellings in Yorkshire Development Group designs for the Leeds City Council at Lovell Park, Leeds.

A second housing contract, worth more than £390,000 has been awarded by the Bradford

and Northern Housing Association for the Scott Wood Lane, Porterswood housing scheme.

Other contracts are a commercial vehicles sales depot for Northside Trucks at Bradford; refurbishing premises for F. S. Assurance, Leeds; a new computer centre for British Ropes at Doncaster; alterations to Ward 8 of Leeds Infirmary; and extensions to the Kingsfisher (Lubrication) premises at Leeds.

Local housing solutions

WIMPEY, which over the years has built in the U.K. something approaching 750,000 homes for private and public sector clients, is currently forging ahead with a housing development concept designed to help fill its order books and get local authorities out of a "sticky spot."

Under the scheme, which Wimpey calls its joint venture plan, the company builds low-cost housing on land owned by local authorities which are hard-pressed to raise finance for their own housing developments. If required, the value of the land in question can be written down in order to gear house prices to the income levels of applicants, who are nominated by the council from their waiting list, and who then receive a building society mortgage in the normal way.

The usual procedure is for the

retail price of the proposed homes to be agreed in advance between the two parties and for the local authority to retain the freehold until the plots and properties are conveyed to the purchasers. Alternatively, the council can grant leases to the purchaser through the contractor.

Wimpey has been co-operating with Liverpool Corporation on such a scheme, close to the city centre on derelict land. Demand has been such that the Corporation has released extra land so that further development can take place. Under the scheme, Wimpey can sell the homes to the general public if no local authority nominees are forthcoming, but this has not so far been necessary.

A Wimpey spokesman indicated that the type of scheme being operated often provided the only solution to the housing

problems of many local authorities, which faced severe financial constraints. "Using land already in ownership enables a council to offer housing applicants to purchase facilities at advantageous terms, so helping to reduce the housing list at no additional cost," he asserted.

Wimpey says it has produced over 1,000 homes in this way in the past five years. Although there will clearly be many authorities whose political leanings will prevent them from contemplating a plan which in effect releases public land into the private sector, the scheme can ensure the development of sites which would otherwise remain empty because of lack of funds, as well as help shorten the waiting list. It also provides Wimpey with land which is becoming increasingly hard to find.

MICHAEL CASSELL

Fairclough in Leeds

A YORKSHIRE local authority housing contract worth more than £5m. has been awarded Fairclough Construction Group.

Work on the 193-dwelling tract for Leeds City Council, already started, Fairclough Building, Northgate, Leeds, based at Garforth, Leeds, erecting the new traditional constructed homes at Canby Road, Holbeck.

Refurbished by Wates

SHORTWAVE radio will be used by Wates Special Works to speed up housing modernisation and conversion work for the London Borough of Southwark.

"Radio Wates" will operate on the firm's latest contract—worth £806,417—which covers Series 10 of municipal housing updating in Southwark. Fifty houses are being repaired, refurbished, fitted with new kitchens, bathrooms, water heaters and gas fires.

Wates has also been awarded a £133,508 contract by the Royal Borough of Kensington and Chelsea for the modernisation and conversion of a late Victorian stucco-faced library building with flats above in Pembroke Square, London, W.2.

The conversion work will provide 11 flats on three floors, a new roof structure forming the third floor. Existing flats are to be modernised and new heating systems installed.

Times block renovation

A LENGTHY contract to refurbish the former Times building in Queen Victoria Street has gone to Higgs and Hill Building the management fee contract figure being £13.7m.

The work is being carried out for Continental Illinois National Bank and Trust Company and requires the rehabilitation of two basements and eight upper floors. It is to be completed by early June, 1978.

It is planned to provide a banking hall, strong room and storage areas, with offices, staff

restaurant and kitchens, as well as new tenant areas.

Architects are Yorke Rosenberg Mardall.

Royal Liver facelift by Bovis

LANDMARK for those on vital conveyance during the war, Royal Liver Building at Pier Head, Liverpool, is to be extensively modernised by Bovis.

Under an award which will be worth between £4m. and £5m., Work is expected to be completed in August 1980 and this extremely difficult operation will be carried out by Bovis Construction with the aid of Arup Associates, designers for the project.

Additionally, Bovis has won a £1.7m. M4 extension job for a 2.5 km. section at Heol Las, Glamorgan.

Laing in £7m. award

BY FAR the largest award in the close on £7m. worth of business just announced by Laing is a £5.1m. modernisation and extension operation on an existing naval establishment at Northwood, Middlesex.

Work will take some four years and involve extensive demolition and reconstruction, providing extra accommodation of about 51,000 square feet.

Laing has also taken a contract worth £195,000 under which it will build council homes for up to 216 people for the London Borough of Barnet. At Crumpling in New Town it will build shops and offices worth £389,000.

Wiltshires wins £3.6m.

THREE awards, totalling just over £3.6m. have been made to Wiltshires, the Kent construction company.

The largest is for 116 houses, flats and maisonettes for the London Borough of Bromley at the junction of Palace Road and Palace Square, S.E.19. Valued at £1,48m., this contract calls for both two- and three-storey buildings. Architect is Aneurin John, London Borough of Bromley.

At Haves, Wiltshires is to construct a civic hall and a supermarket for J. Sainsbury. Total value of this work is £954,300 and operations

are expected to start very soon. Architects are the Elms Sykes Partnership.

The third job involves major alterations and extension to existing £1.2m. at a former gas meter school in Ridgeway Road, Isleworth, Middlesex. Erel and fitting out of a single-storey administration block is as for as well as a workshop, a four-kitchen and dining plus some external works.

Architects for this, cont are Scherrer and Hicks in relation with G. A. Trebrough architect for the don Borough of Hounslow.

Unfinished block is restarted

UNDER A completion contract worth £5m., Holland, Hannen and Cubitts has resumed work on a 18-storey office block in Bristol where operations were suspended some two years ago when the original developers, Town and Commercial Properties, went into liquidation.

The 74 metre high block will provide 12,000 square feet of accommodation on 17 floors. Architects for the completion are Kenneth Wakeford, Jeram and Harris of Bristol.

Dovercourt by-pass

AWARDED by Essex County to Roadworks (1952), a £1.7m. contract covers the construction of the 3.5 km Dovercourt by-pass

which ends at the approach Parkstone Quay, Harwich.

It will include a massive viaduct incorporating an A. prefabricated steel bridge. Roadworks is a wholly-owned subsidiary of Jackson Group.

IN BRIEF

Costain Construction has awarded a contract worth £1.2m. to build Phase II of Orion II, a four-storey office extension at Folkestone for The Grampian Company. Constructed the office block extension from reinforced concrete frame around beams on existing foundations, with hollow floors and roof slabs.

Marine Unit Holdings, monod-based marine electrical specialising in the manufacture and use of under TV and photographic equipment is to open a Scottish office, Church Street, Portsoy, Ban.

Kier, a member of the F. Kier Group, has been awarded two contracts totalling £600,000 from Bedford County Council and Film Co. Towers on behalf of ICI.

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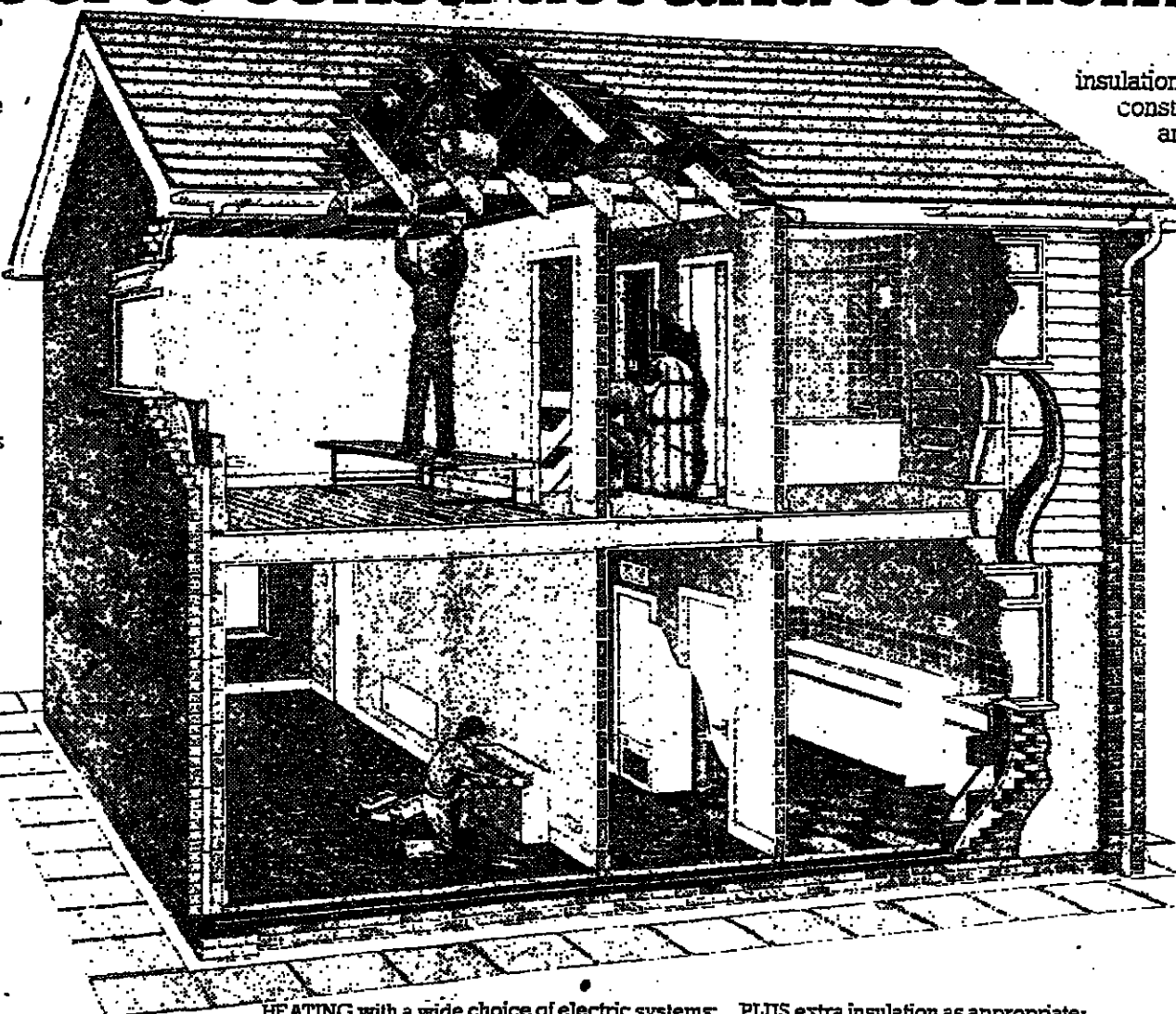
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EQUITABLE MORTGAGE

The Executive's and Office World

EDITED BY CHRISTOPHER LORENZ

The Cameron looks at some of the criteria involved in producing employee reports

Getting the message to sink in

THE PAST year has seen a sudden burgeoning of competitions and awards for "the best employee report." Yet now it seems that even the most badly designed employee report can still generate considerable goodwill within a company's workforce—at least until the novelty wears off.

Studies of reactions to a number of different employee reports suggest it is the thought counts with many workers. Even when people find a particular report boring or patronising or utterly confusing, they still appreciate the gesture on the part of senior management.

Market and Opinion Research International is one of a handful of organisations which carry out surveys of internal company communications and of workers' attitudes to employee reports. Mr. Bob Worcester, the company's managing director, says that far too many organisations devote virtually all their energies to telling people what to do and informing them from on high of what has already been decided. As a result, employees tend to feel uninformed in company affairs.

He says that in view of this it is not surprising that the publication of an employee report is often welcomed by workers who see it as a sign of a more open and consultative approach to management. He adds that employee reports can do much to break down the barriers and attitudes within a company simply because the workforce no longer feels excluded from the mainstream of events. Yet although employees may give a company credit for merely publishing a popular version of the annual report this does not mean they will be uncritical of the document itself, particularly after the first time round. Studies suggest that many organisations make three major mistakes in the way they bring out reports for employees.

To begin with, some companies fail to pay sufficient attention to distribution. They assume that if they place piles of reports around the office or

factory their employees will all come up and take one. They further assume that every copy will be avidly read. Mr. Worcester says his organisation's research shows that this obviously does not happen. There is no point in producing an employee report—however good—if hardly anyone reads it. Yet distribution is not a hard problem to solve. Copies of a report can be handed personally to people while they are at work or they can be posted to their homes, although this method is more expensive. Another possibility is to turn one issue of a company newspaper into an employee report.

Talk down

One of the commonest faults in employee reports, according to current research, is that they talk down to their readers. The use of cartoons, for instance, often lends a condescending tone to a report. Jolly little gnomes carrying bags of gold may be more suited to a child's reading primer than to a report designed for adults. Not unnaturally, most workers resent a patronising approach.

Yet the third major shortcoming of many employee reports is that financial terms are not sufficiently well explained. Mr. Worcester admits that it is not easy to find the correct balance between clarity and patronisation. But he reckons it can be done and insists that it is important for the writers of an employee report to be aware of the need to explain financial terms in a way that is understandable to the majority of employees. It is

probably better for an organisation to say that it has produced profits, whether or not Metal Box kept its employees well informed and whether or not the information given out by

A glossary can be useful, particularly as some employees will feel cheated if their report does not include a fairly traditional financial account of company affairs. A glossary is neutral. It will not insult those who know how to read balance sheets but it will help people who find themselves on the wrong side of an accountancy language barrier.

One of the chief findings of the studies done by Market and Opinion Research International is that employees want information that relates directly to their jobs, their performance, their factory and their prospects. On the whole, people are not terribly interested in the results of overseas subsidiaries or even in the productivity of a company plant 50 miles from their own workplace.

"For the individual to be interested in company results, we have found that an employee report must show how they affect him," Mr. Worcester says. "Our studies suggest that people are not anxious for financial information per se. What they want to know is how company performance is going to influence such things as wage levels, job prospects and possible plant closures."

Market and Opinion Research International has surveyed workers' reactions to about 20 different employee reports. Many of the findings are borne out by one it has just completed for Metal Box.

The sample of Metal Box people who took part in the survey—400 employees, including managers, from 13 different sites—all filled in three-page questionnaires on the strict understanding that replies would be anonymous. Among other things, they were asked what they particularly liked and disliked about the company's employee report, how much of it they had read, what they thought about Metal Box profits, whether or not Metal Box kept its employees well informed and whether or not the information given out by

the company could be believed. Approximately one third of the respondents said they had read most or all of the employee report but 35 per cent. said they had "just glanced through it" and 15 per cent. said they did not look at it at all.

Most people thought the report had been produced to keep them in the picture and to gain goodwill. It seems to have succeeded in this second aim, for the majority of respondents said the thing they liked most about it was the fact that Metal Box had taken the trouble to produce it. In addition to this, about 80 per cent. of those who took part said there was nothing they particularly disliked about the report.

No clear pattern emerged from the criticism that was put forward. Some people said the report was too complex while others claimed that it was over-simplified. A number of respondents criticised the graphics that had been used.

The replies showed that 70 per cent. of the sample had "a lot of interest" in learning about Metal Box business and employ-

ment prospects for the coming year. Only 22 per cent. expressed any great interest in the company's overseas activities.

Attitudes to profits showed a certain ambivalence. Over 90 per cent. of respondents agreed or strongly agreed that Metal Box needed to keep some profit to plough back into the company. About 70 per cent. also agreed that Metal Box needed higher profits in order to pay higher wages. Yet 22 per cent. of those who took part thought that companies' profits in Britain were too high.

The survey found that 15 per cent. of the sample thought Metal Box kept employees fully informed, 49 per cent. thought they were kept "fairly well informed" and 25 per cent. claimed that the company gave them only a limited amount of information. A total of 19 per cent. said they could always believe what Metal Box told them, 57 per cent. said they could "usually" believe it and 15 per cent. said they could believe it "about half the time." Mr. Worcester says these findings show that the credibility of



Some different approaches to delivering the corporate message.

Metal Box is good—certainly above average.

The experience of Market and Opinion Research International suggests that workers in many companies are highly suspicious of the information, motives and assurances of their employers. Mr. Worcester says that in the past respondents to his organisation's surveys have gone to extraordinary lengths to check that their replies really would be anonymous.

Mr. Worcester claims that employees are less suspicious if they know that a survey is being

conducted by an outside organisation and not by their own management. He says that this, along with the statistical and sampling expertise provided by a market research establishment, makes it worthwhile for a company to bring in an external agency.

The services of MORI do not come cheap. Mr. Worcester estimates that a survey of roughly the same size as that carried out for Metal Box would cost in the region of £3,000 to £3,500.

On the other hand, a com-

pany which decided to monitor its communication system internally would have to involve a considerable amount of money and time to the project if wanted to do the job properly.

"There is one thing that research shows clearly," Mr. Worcester says. "The higher you go in a company's hierarchy the more convinced people are that they understand the attitudes of shop floor employees. But it is also true that the higher up you go, the less likely it is that managers will really know what their workforce thinking."

Medical insurance for the smaller groups

ONE EFFECT of successive pay restraints has been to focus attention on the value and use of fringe benefits in the overall remuneration package for employees. One such benefit which was becoming increasingly popular before the current pay policy was the provision by companies of medical insurance enabling employees to make use of private medical and hospital facilities.

Unfortunately, the easing of pay restraint has not yet put company medical insurance schemes back to a pre-pay policy basis when there were no restrictions on setting up such schemes. They are still regarded as a fringe benefit whose value has to be taken into account in the size and scope of any wage settlement and will be subject to the 12-month rule.

Nevertheless, British United Provident Association last week felt that conditions were sufficiently relaxed to launch a new medical insurance scheme, called Company Care, which is aimed at the smaller companies or those where only a few persons will be covered. BUPA's immediate aim does not seem to be to attract new clients which do not have an existing scheme. Rather the first priority has been to produce a system that has several improvements over existing arrangements for the smaller company, and perhaps to attract clients who are at present with other insurers.

Competing

One effect of the pay policy has been to restrict, if not dry up, the flow of new schemes. Thus the few operators in this field are at present competing with each other for a limited amount of business. In May, Private Patients Plan, the other main medical insurance agency, produced its premier health plan which was available for either individuals or small groups. This provided a competitive edge, so it was only to be expected that BUPA would sooner or later bring out an improved version of its own scheme.

BUPA's plan was based on individual rating and made allowance for the claims experience of each participating company. Thus companies with only a few claims would pay lower premiums the following year and vice versa. In contrast, BUPA has gone for simplicity in its design. The plan offers two basic

levels of cover, one for major hospitals in London, the second for hospitals in the rest of the country. Each level has its own premium scale with premiums increasing with age as is usual. But no attempt has been made to link premiums to a particular company's experience. The same scale applies to each company, although there are rebates in premium according to the number of employees covered: it will cover up to 50 employees.

In streamlining the administration BUPA has kept the overall premium level down and thinks that this will be one of its attractions. Of course, any action like this has to be

kept under constant review in case claims become higher than expected. BUPA will be reviewing premiums every six months.

But BUPA has not ignored the possibility of new business in launching its plan. Market conditions under the pay guidelines are now much more flexible. While it remains unlikely that the rank and file would be prepared to forgo part of a wage increase for medical insurance, the top executives may well accept such a scheme.

BUPA is adopting the view that new clients could subscribe to Company Care while the present conditions last: then

when pay limitations are further relaxed or when the main body of employees demands it, they could switch to its main plan for company medical insurance provision—Bulk schemes.

In keeping with its simple approach, BUPA has introduced automatic uprating of benefits within the policy year, so that when payed charges are made in April, the company does not have to re-arrange its insurance cover until the next policy renewal. In addition, BUPA has fixed a maximum level of benefit in any one year at £15,000 per person.

What will it cost the com-

pany? Employees in the 30-40 age range will need a contribution rate of £70.50 each year in London or £51.50 in the provinces. The difference arises mainly from the higher accommodation costs in London hospitals—at present the NHS charges £388 per week for a patient in a London teaching hospital, but only £276 per week in a provincial hospital. The employer can extend the benefit to include the employee's wife and children. For wife only, the cost is double, while for children under 18 it costs an extra £35.25 in London and £25.75 in the provinces.

Eric Shor

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Labour Relations in Europe, Management Centre Europe, Brussels, October 19-21. Fee: B.Fr.21,200 for MCE members, B.Fr.23,550 for non-members. Further details from Management Centre Europe, Avenue de Arts 4, B-1040 Brussels.

Improving Organisational Communications, Brunel University, October 18-21. Fee: £145. Details from the Management Programme, Brunel University, Kingston Lane, Uxbridge, Middlesex.

Modern Executive Accountancy, The London Hilton Hotel, October 6-7. Fee: £110 plus VAT. Details from The Inbucon Management Development Service, Knightsbridge House, 197, Knightsbridge, London, S.W.7. Management Development for Engineers and Technologists, Washington Hotel, London, October 18-19. Fee: £95 plus VAT. Details from ASX, 565, Fulham Road, London, S.W.6.



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Monday October 3 1977

The temper of Labour

THE LABOUR Party conference, which opens in Brighton this morning, is unlikely to provide the floating of the party with very impressive evidence of the unity and responsibility of the Labour movement. Labour conferences seldom do. Indeed, the whole procedure of these occasions might have been expressly designed to give the maximum publicity to the most extreme elements in the party, and to disguise the underlying strength of the moderates in the unions and in Parliament. Nevertheless, as Labour conferences go, this week's affair may well turn out to be surprisingly tame and well behaved. The entire party and, above all, the union leaders are aware that this could easily be the last conference before a general election; and it is clear that a repeat of last year's disastrous shambles, when the Left went on the rampage, would finally put paid to any faintly reviving hopes of a Labour victory.

The economy

Of the main points of contention this week—the economy, the EEC, and the question of the selection of Parliamentary candidates—only the last seems likely to be the source of much embarrassment. The economy and, in particular, the level of unemployment will be the basis of much criticism, and we can expect strong appeals to the Chancellor for an immediate refutation. There will also, no doubt, be a repetition of union attacks on incomes policy in general and especially on the Government's attempt to influence the wage settlements of individual firms. But, unlike last year, Mr. Healey has got some tangible, if still modest, successes to show off and a credible promise of more to come. Psychologically speaking, the situation has been transformed in the last 12 months, and a dawning optimism, however precariously grounded in reality, will probably be enough to sweep aside the Left's complaints for the moment.

On Europe, the Left is in retreat. It is true that the National Executive has produced a strongly anti-EEC document which will be before the conference. But there is evidence of a steady shift within the

Labour movement to accept the re-election of Britain's membership. Mr. Peter Shore is only the most notable of a number of senior anti-Europeans both in Parliament and outside who have been shifting their ground. This shift, which owes a good deal to the firmness of the Prime Minister and the new Foreign Secretary, has been consolidated in the skillful letter on European strategy released by Mr. Callaghan on Friday. This neatly outflanks the NEC paper by adopting some of the main complaints against the EEC, softening them rationally, and then setting them firmly in the context of a determination to improve the Common Market from within. The Prime Minister's is not exactly an ardent Europeanist document but it serves its purpose.

Sacred cows

Left-wing demands for the re-election of sitting MPs by their constituency parties after every election pose a genuine dilemma. In many constituencies re-election will provide an ideal opportunity for Left-wing elements to use their domination of depleted organisations to threaten moderate MPs. On the other hand, the notion of re-election is in many ways a reasonable one, used satisfactorily in other countries by various methods of which the American primary system is the best known.

The most sensible solution from the practical point of view, as well as the most adroit politically, would be to allow re-election to go forward but only on the basis that the entire paid-up Labour membership in the constituency, most of which is likely to be moderate, should participate in the selection process. The party's willingness to adopt such a democratic scheme will be an important indication of its real temper at this time. The threat of a Left-wing takeover, once the constraints of minority rule are removed, is the most formidable deterrent to a vast number of voters and, while the mythology of the Labour Party demands that certain rituals should be observed, the most convincing proof that Labour is still basically worthy of moderate support will be the slaughter this week of at least one or two sacred cows.

The military dimension

BY COINCIDENCE rather than design, the three principal negotiations concerning East-West détente are simultaneously entering a new phase. The first strategic arms limitation agreement (SALT I) between the U.S. and the Soviet Union expires today. A new session of the talks on mutually balanced force reductions (MBFR) in Central Europe opened in Vienna last Friday. And the review conference on the implementation of the 1975 Helsinki Agreement on security and co-operation in Europe (CSCE) begins in Belgrade tomorrow.

Overlap

All of these negotiations are related, at least to the extent that a breakdown in one of them would almost certainly have harmful effects on the others. There are also areas of overlap in that there are certain weapons, for example, that depending on one's definition of "strategic," could be dealt with either in SALT or in MBFR. There is an overlap, too, between MBFR and CSCE in that both the negotiations cover measures designed to remove some of the secrecy that surrounds military manoeuvres. Yet the tendency in the past has been to take all three negotiations separately. There is an opportunity now to view them together.

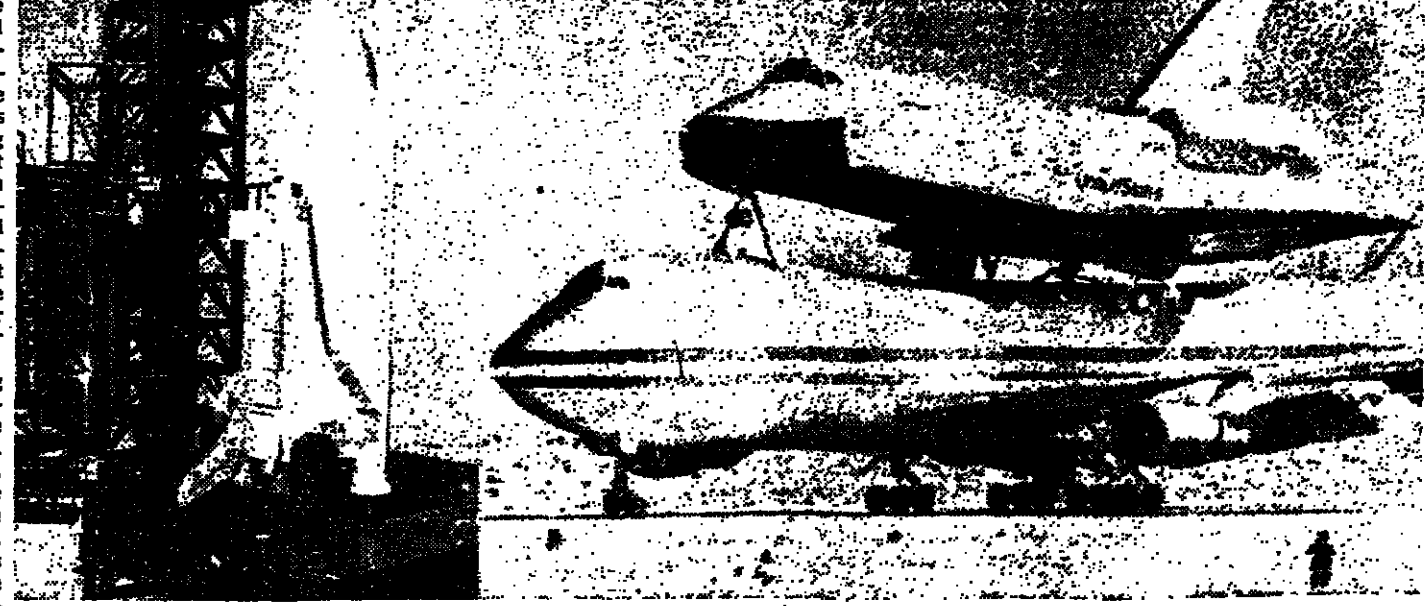
In so doing, it should be said that the fact that SALT I has run out without agreement on a successor is not in itself very serious. Both sides have insisted that they wish to continue negotiations, and both appear to mean it. Indeed there could already have been a SALT 2 if the new U.S. Administration had stuck to the guidelines agreed by President Ford and the Soviet leadership in Vladivostok in 1974. President Carter chose to go for something more on the grounds that such a SALT build-up, if the Russians are 2 would merely have repeated the shortcomings of SALT I: the ceilings on the numbers of strategic weapons would have been too high; there would have been insufficient curbs on new technological developments, and the scope for continued competition would have been such that

Security

There is also a way in which MBFR could be more closely related to CSCE. Any relaxation there has been in East-West relations so far has tended to lack a military dimension. At the same time, the main reason for the increasing suspicion of the Soviet Union in Europe has been the size of its military build-up. If the Russians are seriously interested in security and co-operation, they could be asked to show it by adopting a strategic weapons posture that could be done either by strengthening the security provisions in CSCE or by moving in MBFR. Either way, it should not be overlooked.

David Fishlock, who recently saw the explosion of the European satellite at Cape Canaveral, reports.

Plans for the piggy-back space spectacular



Space shuttle developments: model of the Kennedy Space Centre shuttle facilities (left) showing the mobile launcher. On the right is the space shuttle pictured atop of its 747 carrier at Edwards Air Force Base in California.

Washington they are working on a freight schedule, for putting payloads in orbit on the Space Shuttle. They envisage several different rates — government rates, international rates, commercial rates, even a "getaway special" in which they may launch an experiment for as little as \$3,000-\$5,000 provided it is small, self-contained, and needs no services from the Orbiter.

The "getaway special" is designed to encourage individual scientists, students, even secondary schools, to put experiments into orbit. NASA has been accepting deposits of \$500 for reservations. In the U.S. there have been instances of endowments to local schools to allow them to put down a deposit. In West Germany an agent has already begun to organise "package tours" for scientists' experiments — "cheap trucking," as it is called by Dr. Robert Froesch, 49, NASA's new administrator, fresh from the UN.

But the week in which NASA failed for the second time this summer to place a European satellite in its correct orbit found Dr. Froesch in a sombre and reflective mood about the credibility of NASA and the launch services it offers. "Obviously I'm worried," he admitted. "And although I know a lot of people would not be happy to hear me say it, we do need to look at the question of our commercial terms."

Last Thursday NASA suffered the acute embarrassment of another launch-pad explosion, this time when trying to launch a new U.S. satellite for the U.S.-based Communications Satellite Corporation. NASA, with both its non-military "workhorse" launchers in trouble, promptly halted all further launches from Cape Canaveral.

Until this summer NASA had an excellent record. Then in May, to the intense frustration

of hordes of European scientists who had planned their research around it, NASA failed to place Europe's Geos satellite in the correct orbit. The launcher apparently released it prematurely. As a consequence it will be much less attractive to scientists. Then in June, when Europe's first communication satellite, the Orbital Test Satellite (OTS) was sitting peacefully on the launchpad, one of the nine solid-fuel booster rockets strapped round the main launch vehicle simply dropped off, damaging itself and the main rocket.

Fireworks display

"Tighten bolts OTS and good luck" read an illuminated sign in Cocoa Beach as launcher and satellite were prepared again. The implication was that the satellite had failed. In fact NASA had discovered that a corroded bolt on the McDonnell Douglas 3914 launch vehicle had broken.

But this month OTS was still unlucky. After a perfect countdown the satellite got away bang on schedule, only to be blown up in a spectacular orange firework display high above the spaceport 54 seconds later. First signs were that again a booster rocket had failed — a premature burn-through, NASA announced an urgent investigation. Could there be an ageing problem, asked Dr. Froesch, arising from components long stockpiled by McDonnell Douglas, from which each launcher is assembled to a customer's specification?

The French Press rallied about a U.S. conspiracy to prevent Europe from breaking into the space business with satellites tailored to the needs of Third World nations. Mr. Roy Gibson, director-general of the European Space Agency, remarked ruefully that it was a

good advert for Ariane, the launcher Europe is developing. But Ariane will not be ready before 1980, and it will be a long time before it can match the 12 failures out of 134 launches of the basic Delta rocket since 1960. Europe simply has no alternative at present to negotiating with NASA for its satellite launches, including that of its manned Space Shuttle.

On the other hand, as Dr. Froesch pointed out in reply to charges of sabotaging Europe's efforts to compete in the space industry, the OTS fiasco was certainly no advertisement for the U.S. space industry. And although Europe had suffered three times this summer, all indications were that each problem was different. Moreover, the latest failure involved a different launch vehicle, the Atlas Centaur, and a U.S.-built satellite.

Unlike Geos, however, the OTS project included a back-up satellite, assembled at a modest extra cost of about \$10m. Moreover, for the first time the European Space Agency took out insurance against failure. NASA, so far, has refused to guarantee anyone's launches; but a senior British civil servant at the Department of Industry persuaded the agency to take out private insurance to the tune of about \$29m, covering the cost of assembling a new launcher and the costs of a six-month delay.

Ironically, the 11 nations involved insisted on sharing the risk, pro rata, so slight was it considered. Right up to the launch the Italians were complaining that they had not underwritten their share of the insurance.

Only when, in a few weeks time, the NASA investigations have pieced together the telemetry records and any bits recovered by U.S. Navy divers from 65 feet of water off Florida, will Dr. Froesch be ready to consider any question

trades floating around in the vacuum? Or large metal structures assembled in orbit — would they be stable or could they go into violent oscillation? As for space colonies: "I start with the question: Why rather than from the idea that it would be a fun thing to do? I can't see yet why anyone should want to put, say, 50 people into space." NASA has plenty of people offering to become its fare-paying passengers — even some who send money. It returns the cash but keeps their applications on file. "For the day when I start worrying about running an airline."

More mundane things — in the literal sense — and more good space science, are the twin targets on which Dr. Froesch is setting his sights. He wants to put a very high priority on the usefulness of his research and development programme, including aerona-

the branch that gets left out." Aeronautics accounts for much less than one-tenth of NASA's budget, but he believes his laboratories have a great deal to contribute to energy conservation in air transport. But the major shift will be to emphasise the application of satellite techniques for terrestrial advantages, other than defence — spotting and evaluating the Earth's natural resources, weather forecasting, navigation, communication, broadcasting, and so on. His years with the UN have convinced him that space has a contribution to make to disaster relief in the case of floods, an epidemic. For whole communities marooned by floods, Pennsylvania last month the channels requested by the R. Cross through a jointly owned U.S.-Canadian communication satellite were the only link with Washington. Again with media services, experiments have

ready shown that a satellite system has far-reaching possibilities for bringing advice a relief to remote parts even the U.S. itself. In these areas, even has hopes that the Administration may find some extra money.

But science will not be neglected, he stresses. Plans send a satellite 435m miles Jupiter, deep in financial trouble with the politicians when it took office in June, are to ahead next year. And October NASA starts work on ambitious Large Space Telescope project. The agency must choose from among number of other space missions — to Mars, to Venus, or a satellite in orbit over the polar regions.

But throughout the 1980s expects the Space Shuttle — space machine which launched — as a rock manoeuvres as a spacecraft then lands like an aircraft — remain NASA's most important tool for research and development. "There will be no tinkering," says NASA's administrator. "But this is the vehicle for the next decade."

Engineering problems

Of the orbiting solar station idea, which NASA has been examining with the U.S. Department of Energy, Dr. Froesch says: "I feel it's a long way off." There is no likelihood of any Apollo-type political decisions on this project. However, he believes that the Space Shuttle will afford the opportunity to study some of the manifold engineering questions the project would raise. Power supplies, for example — how would a vacuum switch controlling tens of kilowatts behave in zero-gravity, with metal particles eroded from the elec-

MEN AND MATTERS

Greenback revolutionaries

A bizarre financial riddle had to be solved during the negotiations that ended last night when the hijacked Japanese airliner finally took off from Dacca. The terrorists had said that the plane bringing the freed prisoners from Tokyo should also contain the \$6m ransom — and that two-thirds of it should be in \$100 bills.

The Japanese Cabinet submitted to the terms. But where were the dollars to be found? That may seem a ludicrous question since everyone knows that Japan has vast foreign reserves (\$17.5bn, in fact). But the Bank of Japan did not have enough greenbacks on hand. Nor did the commercial banks, who have been starved all summer of dollar bills.

The Japanese as individuals do not use cheque books and usually pay in cash for everything they buy, so they are reluctant to take anything but cash on trips abroad. Since the number of tourists going abroad this year reached a peak of about 500,000 in July and August alone, the demand for dollar bills, reached unprecedented levels. Most commercial banks have been importing their greenbacks direct from the U.S. — to the tune of about \$32m. For merely one of them. So the Bank of Japan had to do likewise.

On Friday, \$4m in \$100 notes was hurriedly flown across the Pacific. It was then put aboard the ransom plane shortly before it left for Dacca.

Docks debut

John Cuckney's last engagement in America, before flying back to London at the week-end, was which was well tested in sort-



"And now all these in favour of addressing Liberals as 'Brother'..."

to make a tour of the Port of New York. That was a typically forward-looking move, for although he had been across the Atlantic to attend the IMF meeting in his capacity as chairman of the Crown Agents, he takes over this morning as head of the Port of London Authority. Cuckney found his New York counterpart in a pretty embattled state as they journeyed around together by helicopter. A stevedores' strike was just about to start. The immediate outlook at the PLA is far more encouraging, but Cuckney says it none the less "faces massive problems."

He tells me that he looks forward to playing an active role in helping to rehabilitate the derelict areas of London's dockland. "The Authority must involve itself even more closely in the whole future of dockland. It must operate a much healthier environment."

Now 53, Cuckney has earned a reputation for having a brain for great penetrating power, what was wrong with Reclamation Industries International,

ing out the woes of the Crown Agents after the 1974 debacle. ago. He will keep that job. He also brings to the PLA the experience of having successfully reconstructed the Mersey Docks. There is something else that may commend him to London's dockers: he is the first PLA chairman ever not to have a title.

Timely titles

The Young Men's Christian Magazine, the India Rubber and Gutta Percha and Electrical Trades Journal, and the Scottish Leather Trader — all are no more. Swept away by changing tastes and new technology, their place is taken by such titles as Audio-Visual and Materials Reclamation Weekly in the output of MacLaren, one of Britain's most venerable trade and technical publishers.

The company is currently celebrating its 125th anniversary. It was begun as a printing firm in Glasgow by one Walter MacLaren, then moved into publishing — soon after which the Copeman family took control. It is now housed in a rather soulless office block in Croydon, where 11 magazines are turned out by 30 journalists. Managing director John Copeman sees trade and technical publishing as a very stable business. "Our peaks and troughs are not nearly so sharp as you have in the national Press," he told me sympathetically.

Copeman doubts whether magazines often die through too much competition. The market just disappears as an industry declines — although sometimes a journal can be ahead of its time. MacLaren thinks that what was wrong with Reclamation Industries International,

which they folded up two years ago.

Danish dilemma

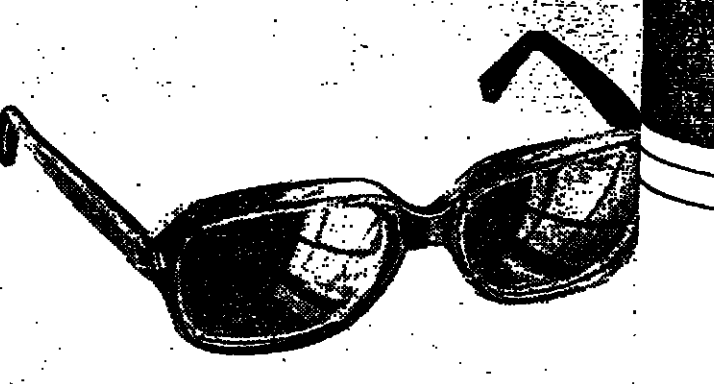
The diplomatic life of the Danes is usually fairly placid, but at the moment the senior officials of the Foreign Ministry in Copenhagen are frowning over a highly sensitive problem. It concerns the four-day visit Queen Margrethe is due to make to Italy from November 8 onwards.

As might be expected, the Queen is to be received by the Pope. However, the Vatican has made it known — politely but firmly — that her husband, Prince Henrik, cannot attend the audience. It is explained that this is an unvarying policy towards former Catholics who have renounced the faith, as the prince did when he and Margrethe were married in June 1967.

Henrik changed not only his faith, but also his nationality and name, when he became a member of the Danish Royal Family, having been until then Count Henri de Laborde de Monpezat. His experience as a diplomat — culminating in a spell of duty at the French Embassy in London — may now come in handy: perhaps he will be discreetly occupied with other duties in Rome when his wife meets the Pope. But Foreign Ministry officials fear that the Danish public will take considerable umbrage over the matter. After all, Prince Henrik had a constitutional obligation to adopt the State Lutheran faith on becoming betrothed to the girl who was then her apparent. There is a possibility that the audience will simply be called off.

Observer

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John Cuckney

FINANCIAL TIMES SURVEY

Monday, October 3 1977

Office Equipment

Old ideas die hard

By Max Wilkinson

THE IDEA that offices are in some way an unproductive drain on the resources of industry is deep rooted even where it is demonstrably illogical.

The idea doubtless stems partly from the resentment which is felt against the large and growing bureaucracies of the Civil Service which are not only paid out of taxes, but usually spend their time collecting and spending a large proportion of the hard earned product of manufacturing industry.

This resentment is sometimes echoed within companies where the "paper pushers" cannot be seen to be creating the sort of tangible wealth which is flowing off the production lines.

These traditional attitudes may help to explain the reluctance of many companies to invest in capital equipment aimed to increase the productivity of the office.

However, it is increasingly being realised that salaries saved in the office can have just as much effect on the ultimate balance-sheet as savings from automation in the factory. And the recent advances in computer based equipment and other

office machinery have demonstrated that very considerable savings are possible.

U.K. companies still lag far behind those in the U.S. and in Germany. This is partly because the very much higher secretarial salaries in those countries make automation a more attractive financial prospect. But there may also be a natural British conservatism at work, backed by a general reluctance to invest at a time when profits have been paltry and the economic outlook very uncertain.

The interaction of conservatism and financial stringency make it difficult to predict the future growth of the U.K. market. While, for example, plain paper copiers have found a ready acceptance and are now considered essential equipment in most companies, the term "word processing" may not even be familiar to some executives. Furthermore, the replacement of paper records by electronic storage or microfilm and the feasibility of electronic mail are still often considered dubious or at the least controversial.

Marketing

The future of many parts of the office equipment industry will therefore depend greatly on the ability of the marketing men to change traditional attitudes as well as on the general economic fortunes of the country.

The change of attitudes is complicated by the fact that there are two separate revolutions now taking place in the office world. The first is in the

vastly improved methods of handling and distributing information in the traditional way by means of pieces of paper. The development and continuous improvement of the plain paper copier has been the most spectacular. The invention has

The ingenuity of manufacturers in designing new ways of bringing automation to the office has sometimes been frustrated by the conservatism of users. There is little doubt, however, that demand for improved equipment is increasing in the U.K.

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The International Business Show will be held at the National Exhibition Centre, Birmingham, on October 11-20.

were made, they could be produced very rapidly on a high speed printer.

Such comprehensive integration of the processing of figures and words has, hitherto, only been possible for companies able to afford a substantial sized computer. However, the rapid increase in the use of microcomputers etched on a thumbnail slice of silicon and of small office machines has made a piecemeal approach more possible.

While, for example, Sperry Univac has concentrated on large systems like UNIS, their recently launched computerised package for manufacturing control, IBM has been approaching the office problem from the other end by adding electronic memories to the simple electric typewriter. The development of automatic typewriters into sophisticated word or text processing equipment is now beginning to merge with the larger scale computer systems, because individual work stations are increasingly being wired up to a central processor.

The power of computers is also being linked with microfilm techniques to give automatic access to a library either through a screen reader or a copier.

The electronics machines within larger offices will not only be wired up together but they will more and more be connected by telecommunications links with other offices in the same company or with other organisations. The enormous instantaneous exchange of data and electronic mail are still not widely understood. However, the keen competition amongst equipment suppliers indicates that a very rapid expansion of the office equipment market is expected in the next few decades.

The International Business Show which opens at the National Exhibition Centre next week (October 11) has attracted no fewer than 350 exhibitors covering 23,000 square metres of stand space.

Revival

This show will be twice the size of the Business Equipment Exhibition two years ago, and indicates the large number of new manufacturers who are trying to carve out their place in the market as well as signs of a revival of the fortunes of the industry this year.

One of the difficulties for the smaller manufacturers is that the large parts of the market are dominated by multinational companies. IBM and Rank Xerox are obvious examples. Gestetner is an example of a smaller company which has achieved a worldwide coverage for its more limited range of products. The same pattern is being reflected in the emerging technologies like word processing and small business computers.

This pattern of worldwide markets served by international companies means that it is unrealistic to expect the U.K. to be self-sufficient across the full range of equipment.

There has been some concern in Government circles that U.K. manufacturers are not carving out a sufficiently large share of the world.

the world market in the newer electronic fields. This is a legitimate general point when considering future trends. However, it is important to consider some of the so called "low technology" parts of office equipment as carefully as sophisticated electronics. Indeed, some relatively simple mechanical devices can have a major impact on office efficiency.

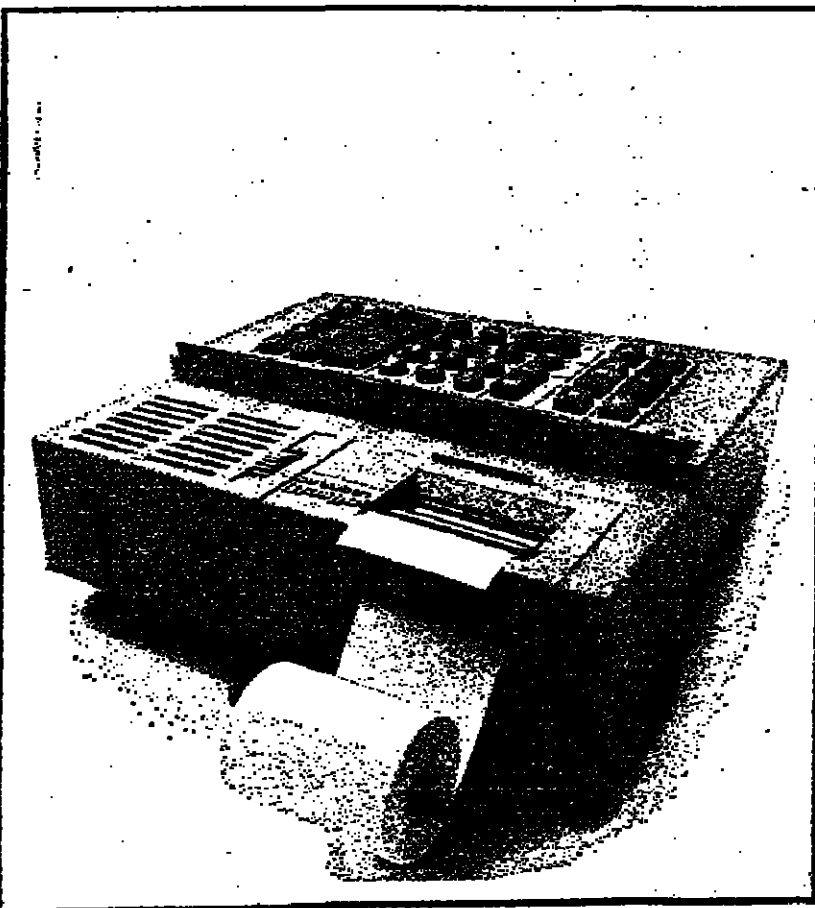
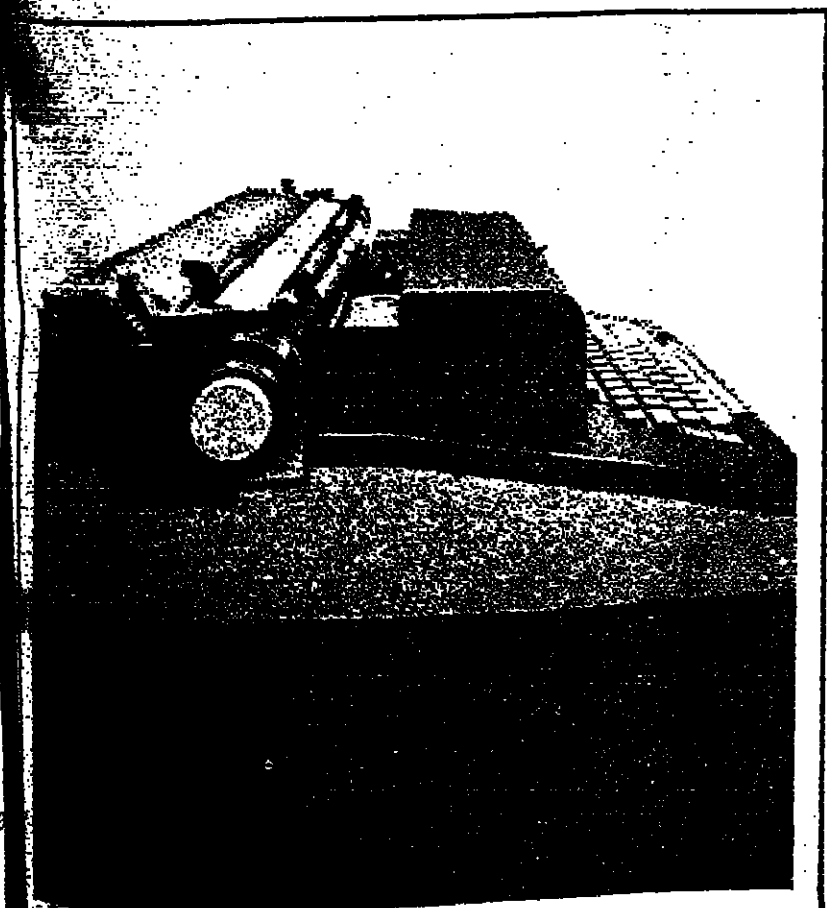
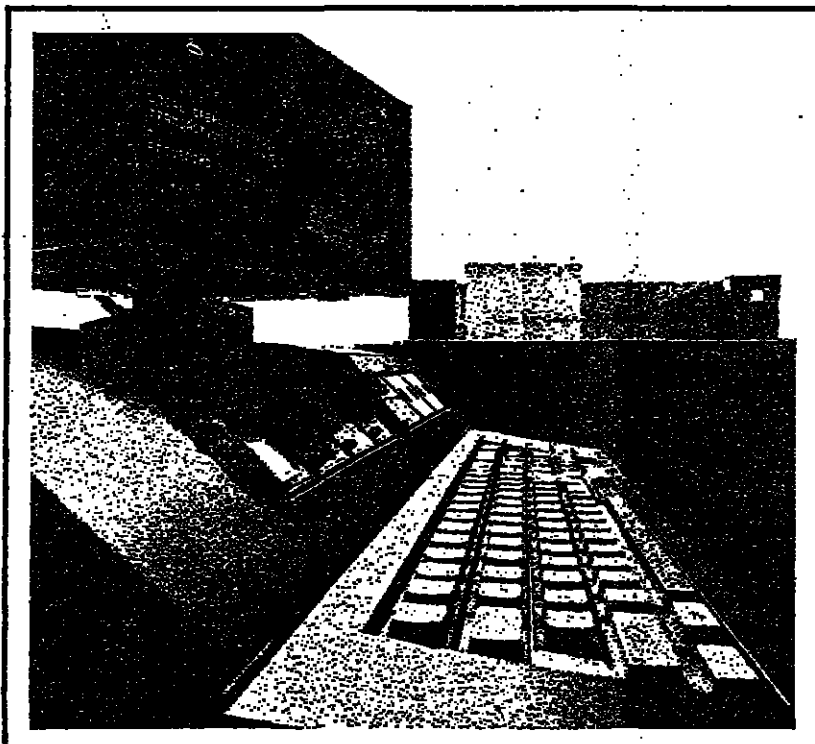
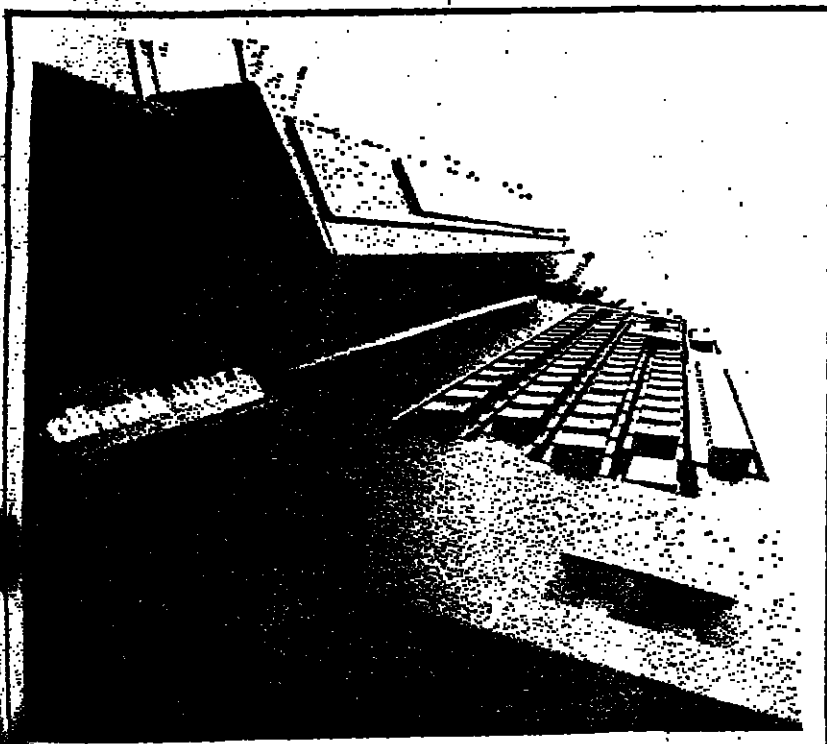
One obvious example is in the office copier field, where increasing emphasis is now being placed on automatic feed systems for the input of documents, and automatic sorting systems for the output.

Similarly, systems for conveying documents efficiently throughout a large office, may have a more important impact on overall efficiency than highly sophisticated machines for making multiple copies.

Similarly the claims of relatively old-established techniques like microfilming need to be considered against the emerging possibility of placing all records in computer storage; and enthusiasm for copies should not lead office managers to forget entirely the complementary virtues of duplication.

That said, however, it remains true that the major challenge for British manufacturers in the office equipment field will be to keep abreast of the truly amazing developments which modern miniature electronics have made possible. The challenge for the business world, and for the public sector will be to understand that automating the office is becoming, not merely a desirable luxury or a means of keeping staff growth in check, but an essential investment for those organisations which want to stay competitive with their opposite numbers in the rest of the world.

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OFFICE EQUIPMENT II

Foreign companies make the running

THE STATISTICS covering from 40,000 in 1975 to 400,000 in 1980. However, the Sector Working Party warns: "The U.K. manufacturing industry taken in its broadest sense of both British owned companies and foreign owned multinationals is not well placed at present to gain a significant share of the new opportunities arising from these changes. This is because, firstly, the British owned companies—many of which are of considerable scale and excellent market reputation, do not generally have an "electronics capability" and there is little scope to accelerate the learning process by joint ventures with U.K. firms with this kind of knowledge."

The task is important because the U.K. stake in the rapidly growing electronic part of the office machine market is in great risk of declining. In the industry as a whole, the U.K.'s product range can be compared with that of any other country except Japan and the U.S.

However, the Sector Working Party has told the Government that manufacturers are "facing several crucial choices" if they are to survive at a level other than that of a provider of products at the low technology end of the market, or an assembler of machinery with higher import content and low added value in the U.K.

Represented

The U.K. is still well represented in the world market for electro-mechanical machines, which are likely to provide companies like Gestetner with a good living for years to come.

In the range of products which increasingly depend on microelectronics and computer-aided design, the U.K. style peripheral equipment, through Rank Xerox, has had a U.K. is now poorly represented, a dominant world position. Growth in this area is expected to be very rapid—perhaps 25 per cent a year. It has been said to have declined estimated, for example, that the from 11.5 per cent in 1983 to installations of automatic type-3 per cent in 1973. Average writers will grow from 400,000 growth in world trade for this to 850,000 in the U.S. between group is put at 11 per cent. On 1975 and 1980. In the EEC the assumption of a total home a tenfold growth in the five-year period has been predicted, by 1980, total U.K. production

would have to rise 60 per cent to 260m. at 1975 prices to meet both the export target and the target for reduction of import penetration.

However, the very large area of doubt about any figures relating to office equipment can be illustrated by the fact that the Business Equipment Trade Association currently estimates its members' production at £1.5bn. in 1976 of which £668m. was exports. This figure, however, represents the output of a very wide range of companies many of whose products have very little in common except that they may both end up in an office.

Perhaps a more helpful way of looking at the problem is to break down the market into different product sectors. Mackintosh Consultants has done this in its Yearbook of West European Electronics Data, 1978, to be published later this month.

It estimates the U.S. market for desk calculators in 1977 to be worth \$48m. representing 6m. machines. For automatic typewriters it puts the market at \$4m. or 3,000 units; electric typewriters, \$25m. and 110,000 units; electronic cash registers \$7m.; dictation equipment, \$5m. or 130,000 units; electronic accounting systems \$34m. and 22,000 units; office copiers \$57.7m.

Peripherals

In addition, the market for computer systems and peripherals, which includes some specifically office-orientated equipment is put at \$674m.

The Mackintosh figures thus put the current market for electronic office equipment, excluding computers, at about \$180m. at 1976 values. They show, in addition, that the fastest rise is expected in automatic typewriters where the market is expected to grow by 160 per cent to \$8m. by 1981.

However, the big money will, according to the predictions, remain in copiers where, in the

ESTIMATED U.K. MARKET FOR ELECTRONIC OFFICE EQUIPMENT (£m.)

	1976	1977	1978	1981
Calculators	43	48	53	—
Electric typewriters	24	25	26	31
Automatic typewriters	3	4	4	8
Electronic cash registers	6	7	8	10
Electronic accounting systems	31	34	37	50
Dictation equipment	4	5	5	7
Plain paper copiers	40	46	70	85
Direct electrostatic copiers	9	12	14	18
Small copiers	25	30	50	50

Source: Mackintosh Consultants

same period, a 100 per cent growth is expected to bring the market to £105m. in 1981.

The growth of computers and peripherals is expected to be even more spectacular from 1976, £144m. for computers and \$382m. for peripherals to, in 1981, \$326m. for computers and \$587m. for peripherals. However, it is not clear how much of this can properly be classed as "office equipment."

While the growth in word processing is expected to be rapid, the market starts from a small base compared with that for copiers and accounting systems which already have an established place in most organisations. On the other hand the potential for word processing or automatic typewriters appears enormous. The market for word processors in the U.S. is estimated to be some \$350m. in 1978, more than ten times the U.K. figure. It is likely that sooner or later British managers will catch up with those in the U.S. and Germany. In the world as a whole, it is estimated that only 2 per cent of the 24m. office typewriters are automatic.

At the same time the copier market is expected to continue to expand worldwide at a rapid rate. Dataquest expects worldwide copying and duplicating volumes to increase by 7 per cent annually and revenues by 13 per cent, compounded up to

1980. It is expected that in general the plain paper copier will continue to make headway against the coated paper copier and other processes.

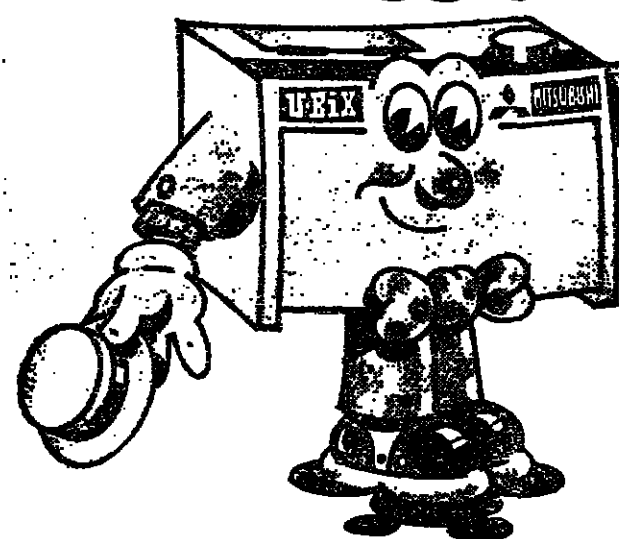
Growth

In addition to the main product groups which have been tabulated there is likely to be significant growth in the communications field with the entry of IBM into the private exchange market with its 3750 store program control system. The U.K. market is estimated to worth something over £50m. present. Facsimile transmission has been slow to gain acceptance, partly because of machines marketed by different companies are not compatible. They are therefore used mainly for particular applications like communication of copy to printer and the return of proof in the longer term equipment capable of linking word processors to the telecommunications network can be expected to challenge facsimile equipment.

It seems likely that in the longer term more and more emphasis will be put on communications, which would see to be one of the areas which has almost unlimited potential for future growth in the office equipment field.

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Replacing the letter

IT MAY seem ironic that the Carter Committee's suggestion that the Post Office should be split up comes just at the time when pundits are getting excited about the prospects of "electronic mail."

For the very words imply a fusion between the traditional letter and telecommunications. However, this is not really the case, for electronic mail could, in theory at least, render a large part of the present postal service obsolete.

Whether it will in fact do so will depend more on social than on technological progress, for there is little doubt that the transmission of letters by electronic means will soon be economically attractive as well as feasible.

The uncertainty is more about whether people will readily accept the change of format and style of correspondence and the quite radical challenge to traditional working habits.

There are several different forms that electronic mail could take. All of them have in common the fact that they depend to a considerable extent on electronic components which show every sign of continuing to fall in price, and that, once installed, they are economical in manpower. Traditional mail services, by contrast, can only be automated to a limited extent. They will always be labour-intensive, and as the cost of labour increases, they will tend to become relatively more expensive.

However, the economics of electronic mail are not simply a matter of drawing two curves—for the rising cost of postage and the falling cost of electronics—to see where they cross. It is necessary to consider the different types of mail and how they could be handled by an electronic medium. It is obvious, for example, that the majority of private households do not receive enough letters to justify the installation of a printer capable of receiving electronically transmitted letters. Indeed, many private letters are still written in ink

on lavender-coloured notepaper, and doubtless the recipients would not want it otherwise. At the other extreme, where there is a large volume of correspondence between a few large offices, for example in banking, bulk deliveries by post may remain competitive with electronic transmission for some time to come.

It is likely, therefore, that electronic mail will continue to develop from rather specialist applications alongside the conventional methods of communication like the telephone and the post.

Although "electronic mail" has a certain science fiction sound about it, the basic concept is familiar through the telex network. Telex was not originally electronic, although modern equipment has become so. Telex was developed from the very simple idea of connecting a typewriter keyboard through a multicore cable to a printer at the receiving end.

Current

Depression of any key sends an electric current through a unique combination of wires, which are connected to the receiver in such a way that the corresponding character is printed out. The inherent disadvantage is that the wires have to be in use for the whole of the time it takes to type a message. Modern machines use a paper tape which is punched at typing speed and then run through the telex transmitter at a higher speed, but even this does not approach the transmission speed which is possible in a completely electronic method of operation.

The coming generation of electronic mail will use equipment which looks superficially similar to the telex in that it will consist of a keyboard and printer connected by telephone wires (or telex wires) to the GPO network. The principle of operation is, however, very different because it depends upon

the digital code (on/off electrical pulses) used by computers.

The basic idea is that text keyed into a machine which turns each character into a digital code (rather like Mo code) and stores it on a magnetic tape, card or disc with instructions about format of the document.

These electronic pulses are then transmitted at extremely high speed down a high grade telephone line or a link to a magnetic store at other end. When the message has been received, the tape disc is used to drive the printer when it is convenient. The advantage of this type of communication is that the speed of transmission is not limited by the speed of a typist or by mechanical speed of a printer. Transmission time for a full page of text would be a few seconds, depending on capacity of the line.

Mackintosh Consultants, are engaged on a study of electronic mail for a number of postal authorities; estimate cost of sending a page 19 London to Edinburgh would be 2 cents compared with 17 p by surface mail.

Between New York and San Francisco, the comparison works out at 13 cents by face mail and 2.5 cents by electronic mail. Clearly extra cost of the equipment needed for electronic mail to be taken into account, this will be installed in offices anyway for other processing functions. The standing advantage, of course, will be speed, when the function of a letter can be combined with the rapid response associated with the telex or teleprinter.

One of the main problems apart from getting users' acceptance, is that different processing systems may not be compatible. There is no reason in principle, why the hard manufactured by one should not receive messages from another.

CONTINUED ON NEXT PAGE

سید، آید، آید

Secretaries demand an electric typewriter

THE MAJOR and obvious trend in the typewriter market is the shift from manual machines to electric machines, a trend which is extending itself to take in secretaries as well as office typewriters.

There are, however, a number of special factors within this general shift which qualify the generalisation. In the first place, Britain lags behind the other advanced industrial countries in the speed of changeover and the distance travelled along the road to electrification. While precise figures on machines in use are impossible to obtain, informed guesswork put the ratio of electric to manual at around one-and-a-half to one.

This compares with a Euro-

pean-in-use ratio of more than 2:1 and an American ratio of around 10:1 in favour of electric. Typewriter executives have no other explanation for it than conservatism on the part of British bosses, allied to the reluctance of Government departments and especially local government offices to invest in electric machines.

But these executives are hoping for the efficacy of another factor—secretarial power—to hasten, as they would see it, the inevitable course of events. The continuing shortage of skilled secretaries gives them a growth leverage, not just on rates of pay, but on conditions in the office. The office manager who refuses to replace the battered manual with electric may find himself faced, not just with

complaints, but with non-compliance. This factor becomes stronger as the electric machines grow more sophisticated, increasing their attractiveness over manuals.

Third, though the domestic market is reluctantly going electric, there is a growing market in the developing countries which are at an earlier phase of office development, and which are demanding manuals in large numbers. More than 80 per cent of the manual machines which Olivetti makes at its Glasgow factory, for example, is for export.

Finally—a counterbalancing factor—innovation on manual typewriters has, according to the manufacturers, reached the limits of their ingenuity. Any further improvements to manual models will not be major: they are in practice con-



The electric typewriter is gradually becoming a standard piece of equipment for the modern secretary

Letter

CONTINUED FROM PREVIOUS PAGE

ent on a competitor's equipment since printers and magnetic storage devices will be basically similar. However, the programmes used to operate the machinery function to organise the text will be standardised if communication by this means is to become common.

The main competitor to electronic mail using word processors or computer terminal equipment is the facsimile machine. This looks similar to a plain paper copier which is connected by normal telephone links with a similar machine at the other end. The machine scans the original, converts the image to electronic pulses and sends it to the receiver where an exact duplicate is formed. Initially transmission times were comparatively low—up to 9 minutes per page—but manufacturers are steadily speeding up the process. The Kalle Infotec 6000,

for example, can make a copy of an A4 sheet in 35 seconds at its fastest speed. Longer, is needed, however, to make high quality copies. The advantage of facsimile machines or "fax" is that signatures, graphics and letterheads are transmitted just as easily as text. On the other hand, the relatively expensive equipment cannot be used for any other purpose, and different machines have, until recently, been incompatible.

However, 3M is now marketing a portable desk-top facsimile transceiver, which it claims is compatible with "many other manufacturers' machines," and it is probably only a matter of time before the industry adopts a standard which will allow more flexible communication.

The development of electronic mail which aims to produce a paper or "hard copy" at the receiver's end must be considered alongside the even more

futuristic possibility of dispensing with paper altogether by using television screens to display the written word.

The enormous advantage is that very many businesses and ordinary homes already have the basic equipment needed, a telephone and a television. The development of Teletext, the system which allows written words to be sent out on the broadcast channels simultaneously with normal programmes, is beginning to accustom the public to the basic idea.

If the idea that big firms and government agencies will be communicating with the citizenry through their television sets has an unpleasant suggestion of 1984, it is sobering to reflect that by that date the technology will be well developed and the practice will be advancing rapidly.

entertainments. It is a small step however, to envisage individuals or offices sending messages to the computer, which could then be re-routed to be displayed on some other subscriber's screen.

This type of truly electronic mail will be most suitable for relatively short messages. However, it may in the not too distant future have considerable potential for businesses which wish to get in touch with customers, to advise, for example, that a repair is ready, send a quotation, or provide basic price information on request.

If the idea that big firms and government agencies will be communicating with the citizenry through their television sets has an unpleasant suggestion of 1984, it is sobering to reflect that by that date the technology will be well developed and the practice will be advancing rapidly.

Intense

The intense competition among the big four—which reaches such lengths that their executives are unwilling to release their estimated market shares—has meant that there is a high priority put upon innovation in the electric market.

The two basic types of electric machines, manufactured by all the big four companies, are the "typebar" or "type basket" machines and the "golfball" or "single element" model. The typebar models are really electrified manual machines, in which the keys are made to strike the paper by electric impulses rather than finger pressure.

The golfball machines work on the principle of a single globe of about 1 inch diameter, with all the standard characters in relief upon it. Pressure on the keys causes two movements: first, an adjustment sideways and up or down to select the character required, then the movement of the head to the paper.

The obvious advantage of the golfball is its interchangeability, allowing the operator to select a wide variety of types. Because of this interchangeability many companies see the trend within the electric market moving towards golf balls. But Olympia,

for example, prefer typebars each letter which its size "de-first golfball portable to be served," and produces a printed virtually all of these machines are for the U.S. market. The 83DL features in "Fortune's" list of the best designed products over the past 25 years.

The next challenge for the big four companies is perhaps the golfball portable with proportional spacing: besides, there is a constant search for the noiseless typewriter, and for keys which can be activated by the merest touch of the finger.

The speed of the innovative process is such that in many offices, ageing Remingtons with metal keys co-exist with streamlined golfballs. This article was typed on one of the former sort, demonstrating either the conservatism of newspaper management, or the fact that journalists have much to learn from secretaries on office militancy.

It has also had another first, with the Lexicon 83DL—the

John Lloyd

"FOR GOODNESS SAKE... I'M DOING MY BEST"

WHY HAVEN'T YOU SENT OUT MY INVOICES?

WE MUST HAVE THOSE STOCK FIGURES, SIR.

THE CHAIRMAN WANTS YOU RIGHT AWAY.

WE HAVEN'T PAID.

MY PAYROLL IS 'UP THE SWANEE' AGAIN, OLD BOY.

I AM VERY DISTURBED BY THE CHAOS IN YOUR ACCOUNTS DEPARTMENT. STUPID ERRORS AND LATE PAYMENTS ARE GETTING THE COMPANY A BAD NAME. IT SIMPLY WON'T DO—I HAD EXPECTED GREATER THINGS FROM YOU!

I'M SORRY SIR BUT WE ARE JUST NOT COPING WITH THE INCREASED VOLUME OF BUSINESS. I DESPERATELY NEED MORE STAFF.

NONSENSE MAN YOU HAVE FAR TOO MANY PEOPLE ALREADY. COME UP WITH THE ANSWER OR YOU'RE FIRED!

IT'S A NIGHTMARE THE OLD BOY IS RIGHT... IT'S ALL MY FAULT.

YOU MUSTN'T BLAME YOURSELF. SURELY IT IS JUST THAT THE WORK IS GROWING AND WE JUST CAN'T KEEP UP?

YOU WISHED TO SEE ME SIR?

HAVE YOU THOUGHT OF GETTING AN OFFICE COMPUTER?

YES BUT THEY CAN COST YOUR FORTUNE... STILL IT'S AN IDEA LIKE KIENZLE A BUZZ. WILL YOU?

THIS IS OUR 2000 COMPUTER. IT IS ALL YOU NEED TO HANDLE YOUR INVOICING, YOUR SALES, PURCHASE AND NOMINAL LEDGERS, ALL YOUR STOCK CONTROL AND REGULAR ANALYSIS FIGURES FOR YOUR BOARD.

COST?

VERY REASONABLE INDEED—UNDER £10,000 TO BUY OUTRIGHT OR AT £55 A WEEK ON RENTAL. IT WILL COST YOU LESS THAN A CLERK.

WILL IT MATCH MY PRESENT ROUTINE?

CERTAINLY, WE CAN OFFER AN ENTIRELY FREE PACKAGE PROGRAM, WHICH ADAPTS TO SUIT YOUR EXISTING ADMINISTRATION. IN FACT YOU WILL SEE YOUR PROGRAM ACTUALLY DEMONSTRATED BEFORE YOU PLACE YOUR ORDER.

IS IT EASY TO USE?

VERY.

AND A KIENZLE 2000 IS THE COMPLETE SOLUTION SIR.

I AM PLEASED TO REPORT THAT YOUR COMPANY HAS MADE SUBSTANTIAL PROGRESS. OUR SUCCESS IS LARGELY DUE TO THE BRILLIANT EFFORTS OF OUR NEW FINANCIAL DIRECTOR WHO HAS TAKEN OUR ADMINISTRATION INTO THE COMPUTER AGE.

THANKS TO KIENZLE

WELL DONE LAD.

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OFFICE EQUIPMENT IV

Word processing catches on

WORD PROCESSING, that rather ugly term for automation in the field of producing documents, now presents a bewildering variety of concepts and equipment.

First, the confusion about what word processing actually consists of is more than a matter of semantics, because it involves basic thinking about where the secretary should fit into a modern electronic office, and what his or her tasks will be.

The most general definition coined by IBM in the 1960s was that "word processing is the sum of the activities involved in composing, dictating, recording, transcribing and typing words in the modern office."

Although that definition may appear rather vague and all-embracing, it is a helpful reminder that the total system between the conception and final production of a letter or report may be at least as important as the pieces of equipment, whether automatic or manual, which are used in the process.

Thus the re-organisation of secretaries into a typing pool, the purchase of dictating equipment and the setting up of automatic typewriting or computer controlled editing can all be linked.

Further, more organisations with similar needs may come to very different solutions. One, for example, may favour a centralised solution with a pool of typists with computer style keyboards and visual display units (television screens) all linked to a central computer and one or two high speed printers for the whole system.

Another organisation may think it more important to give



The Contessa word processor, which costs less than £5,000.

individual secretaries more control over their own finished product. In this case secretaries would be assigned to a particular boss or group of bosses, and would have machines with their own independent processor.

The IBM definition also emphasises automation of dictating machines so that, for example, different "takes" distributed to different typists,

with some 20 different companies now competing in the U.K. market. Prices range from about £3,000 for a simple automatic typewriter. This can store text on a cassette tape or magnetic card which can be used to drive the printer. The machines have correction facilities of varying sophistication. The most basic requirement is for a program which will automatically re-align text when an insertion or deletion is made to the draft copy.

More sophisticated machines, which can cost £8,000 to £10,000, allow complete text editing with re-arrangement of paragraphs and alterations to layout performed on a visual display unit before and without the need for anything to be printed on paper apart from the final copy. At their most sophisticated, word processors are almost indistinguishable from computer terminals. The operator may, indeed, have the facility for interrogating the computer to extract information like customer files and prices which can be automatically incorporated into a letter without the need to consult visual records.

It is likely, indeed, that the top end of the word processing market will increasingly merge with that of small office computers, particularly as the price of memories and processors is still on a falling trend. The speed of change is, indeed, so fast that any purchaser would do well to pause for a moment or two to take a slightly philosophical view of the future. This must take into account the increasingly sophisticated use of microprocessors (computers on a thumbnail), where they will be connected to more and more links with other equipment and more extensive use of high capacity electronic memories.

In the next few years it is likely that these "shared logic" systems will move into the realms of computer technology, where they will be connected to very large magnetic storage devices and will have the ability to drive sophisticated output equipment like, for example, photo typesetters. There will also be increased scope for linking word processing equipment to the telecommunications network to use them for direct communication as well as the generation of the written word.

At the same time, the expansion of use of microprocessors will give increasing power to the smaller, stand alone, systems which are likely to assume the functions now reserved for the more expensive machines. In the course of this development it seems unlikely that all the companies now competing for the market will survive against the overwhelming strength of IBM and more recently Rank Xerox, which is second. A machine using a cassette, by contrast, will take much longer to search through different parts of a text if this is required.

On the other hand, cassettes priced machine using disc storage

age and offering a window display, like that of a calculator. However, the smaller companies do have one advantage in the present very fast changing scene. That is that they can move more quickly with technological developments than IBM, which always has to consider the implications for the large number of machines which it already has in the field.

There is already a risk that too many incompatible models will be put on the market, that it will be difficult and expensive for the industry to maintain them. There is a risk, too, that organisations which buy equipment now will find it obsolete in a very short time.

Savings

On the other hand, the potential savings are large, so that the capital cost can often be recovered quickly.

In some cases savings of 7 per cent have been claimed. More usually productivity goes up by between 100 per cent and 250 per cent. IBM, for example, found that the output of its 500 typists in the U.S. improved by 150 per cent at the introduction of word processing equipment.

The benefits will depend, merely on the type of work involved, but on what executives and typists can do with their old habits to match equipment's greater capabilities. Executives who draft letters, longhand, or even those who insist on giving a shorthand dictation, may be throwing away a large part of the potential improvement in productivity gained by investing in new machine. Generally, it is in the areas which require a lot of routine typing, such as mail order firms, that the benefit will show up most. Word processing is also beginning to be used extensively in law firms and other offices which individually typed documents (for example, wills) often in a large proportion of text which can be standardised and pre-recorded.

At the same time, equipment is now becoming so sophisticated that machines are beginning to take a large part in composing letters which look as if they were entirely personal and individual.

Even letters of complaint received by a large organisation are now being answered automatically by the use of word processors. A large number of pre-recorded paragraphs answering the more usual complaints, is stored on a magnetic disc. The person answering the complaint then only has to select the most appropriate paragraphs and insert a few words, sentences relevant to the particular case. In another application, details of an uncompensated payment are calculated and printed out by central computer in the form of a letter which is made to look as if it was sent from the manager, personally, to the claimant.

It is indeed difficult to see limit to the complexity which word processors connected computers will eventually be able to handle.

At the other end of the scale word processing is opening the way to a vastly more compact and more efficient system office filing. For, once letters and documents are recorded electronically, they can be stored and analysed electronically. A single document could, if necessary, be cross-referenced 100 times completely automatically, so that the relevant points could be extracted with a whole range of different filters being consulted. This would not even require a great sophistication on the part of the word processor, for once a document has been recorded magnetically it can be fed into a large or small computer system at leisure for analysis and updating of the contents.

Max Wilkins

Why more business people talk to Philips than anyone else.



More businesses buy Philips dictation and notetaking equipment than any other make.

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Any combination of Philips equipment gives you a Philips dictation system.

Because all Philips dictation equipment uses the Philips Mini-cassette: the key to cost-saving dictation.

This means as your business grows so can your Philips system.

While we're on the subject, the Philips Mini-cassette is a plus on its own.

It keeps dictation down to 15 minutes a side (30 minutes total).

An important point if you like to even out your secretary's workload.

Philips doesn't just work in the office.

Out of the office, you can record all your notes on any one of three Philips portables.

Finally we come to Philips dealers. There's one near you.

He's there to help you choose the right Philips equipment.

For now, and when your business expands.

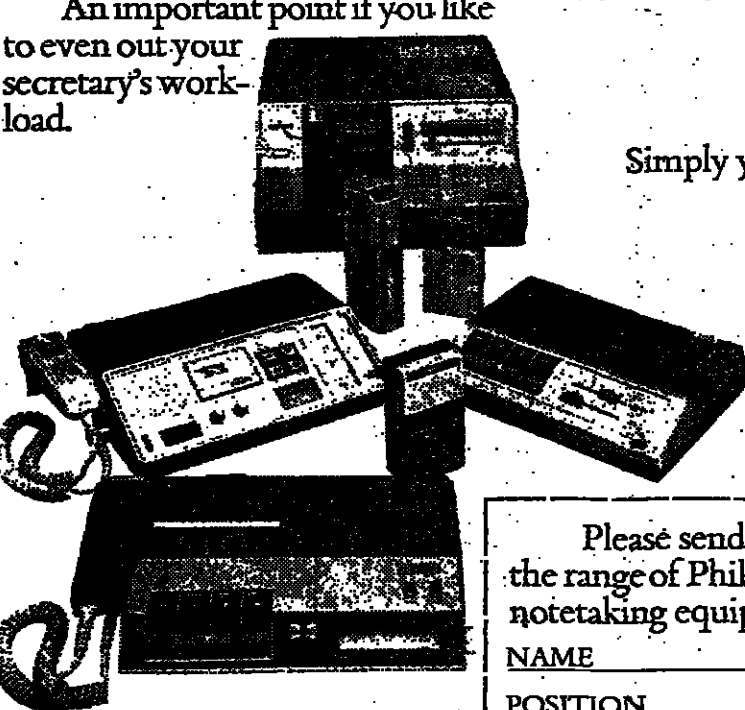
And he's always on call to keep your system working smoothly.

One or more of the above advantages may help you decide on Philips.

However, all of them made Philips what they are today.

Britain's biggest selling range of dictation equipment.

To find out more about Philips dictation and notetaking equipment, send the coupon to: Philips Electrical Limited, Department SP, P.O. Box 3, Horley, Surrey.



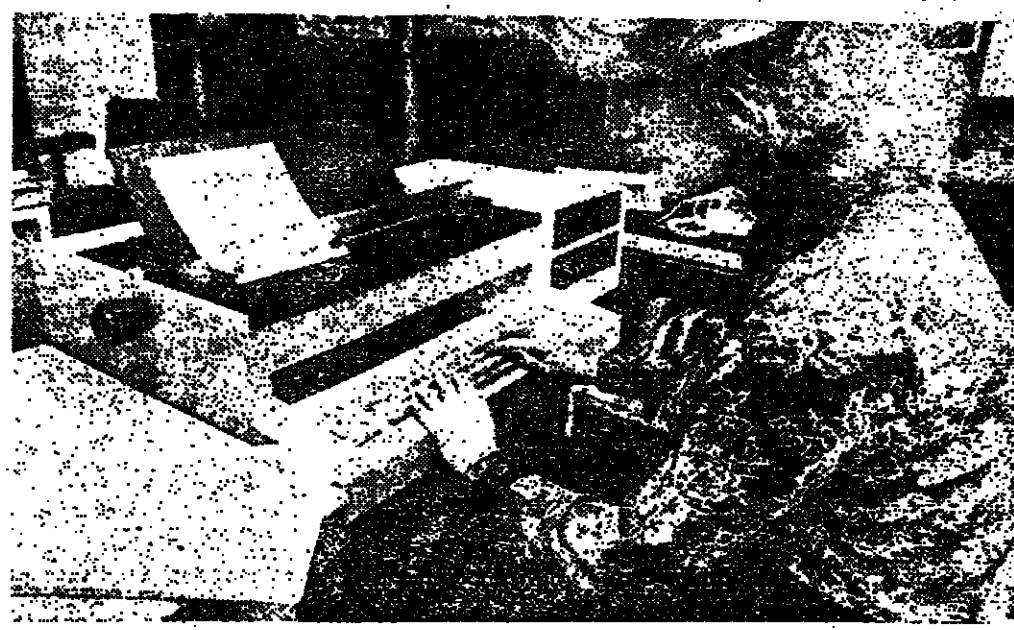
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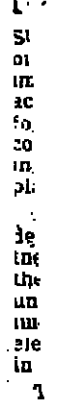
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British Olivetti's TES 501 word data processing unit.

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on the opposite coast of the U.S. Benefits would include far greater clarity of transmission and freedom from delays, and the whole system could prove much cheaper to run than alternatives.

SSS has stated categorically that it has no ambitions to run its services in Europe, which is hardly surprising when the quibbles over launchers for satellites and the slowness of inter-PTT collaboration are considered. There is a project to use a channel on the European Arbitral Test Satellite when that finally gets aloft, to transmit data between laboratories. This is a far cry from the "voice, image and data" total service aimed at by IBM.

Before the European tests take place, it is likely that a good deal of progress will have been made in the Netherlands with the Philips-originated TV-phone. A limited network is installed, and while the equipment is still somewhat cumbersome, there is no doubt that it can save an enormous amount of executive time by removing the need to travel.

Going back to the facility mentioned above of being able to select just two digits for frequently-made calls, leaving the PABX to do the rest, the Pré organisation has been working on equipment—some compact enough to go inside a handset—to do just that. Marketed at the moment in test areas by the Post Office, the equipment has taken some 6-10 years to develop and comes with various capacities for numbers. One unit, with ability to remember 64 ten-digit numbers, will also call as often as required to make the connection and will warn the user that his call is waiting.

The units do not use a micro-computer to drive them, although they could do so. Instead, a large-scale integrated circuit has been designed specifically to meet the purpose. According to Pye engineers, this will not only be cheaper but will allow them to make the driver for the units much more compact.

For Pye/Philips, this kind of work is a natural since they have been in telephony for many years. But why should IBM become involved in what, for the corporation, appears to be totally foreign territory?

Although good progress is being made in conferencing systems in Britain in particular by the Plessey group, it would seem that nothing can really replace the effect of "eyeball to eyeball." But whether Post Office links in Britain could carry view-phone traffic is a moot point. It might well have to wait until a large number of optical fibre links have been laid in the U.K.—say 10-15 years from now.

Apart from improving the telephone there are many other means of providing better communications in the office. One of these is the intercom, which has advanced enormously with the introduction of solid state circuits. Many varieties are now available. One of the most recent to arrive on the market being the Stentofon Panaet backed by Cable and Wireless U.K. Services. This will handle between four and several thousand intercom stations and is controlled by sliding plug-in circuit boards. Users can select a terminal with a touch of a hand-free ordinary speech, a confidential mode, touch-tone dialling, undistorted sound and a lock-out switch.

For key staff involved in services or maintenance around a large building block there are the paging systems such as those by Multitone or Telephone Rentals, the latest of which have message and "acknowledge" facilities. Multitone has very recently released its T20 Transcoder, a desktop-top unit that will handle up to 20 paging receivers. Indicator lamps show when a call is in progress or when speech may begin, and the whole control unit with radio and whip aerial goes into a compact assembly. Output is 2 watts or enough for most medium-size buildings.

The image displays a stack of perforated metal sheets, possibly for a technical or industrial application. The sheets are arranged in a stepped, overlapping manner, with the top sheet being the most prominent. Each sheet is characterized by a series of small, dark, circular perforations spaced evenly across its surface. The entire image is heavily degraded with significant vertical banding and noise, suggesting a poor quality scan or a heavily processed image. The background is a dark, textured surface, and the overall appearance is grainy and high-contrast.

Carbon-interleaved listing paper has its problems. Handling it can produce smudging on forms, clothing and work areas.

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Accounting machines

THE ELECTRONIC accounting machine business is going through yet another period of transition. These days development in most electronics fields is a swift process and the spin-offs that have developed from more conventional computer research have been keeping the accounting machine end of the business very much in the vanguard of technical progress.

At the moment customer demand is swinging away from what is generally known as the VRC to the SBS—from the visible record computer which needs the use of some form of hand-operated card to prompt it into action to the small business machine, the latest generation of accounting equipment which is virtually a mini (but fully fledged) computer. Over the past year the increase in demand for small business machines has been massive and sudden.

According to the Computer Information Centre—the client-based computer advisory service—the number of small business machines used for accountancy purposes rose by very nearly three-quarters in 1976. At the end of 1975 there were something like 8,500 small business machines in operation in the U.K., whereas in December of last year this figure had risen to around 14,600.

The switch in emphasis is being propelled by all the major manufacturers, with companies like Burroughs, NCR, and Philips attempting to increase their share of this important

business machine market. Together with Olivetti, these three manufacturing companies may control around 70 per cent. of the overall market in sophisticated accounting equipment. Burroughs holds something like a quarter of this market, with NCR not far behind with about a sixth. Thereafter the market share ratios become more thinly spread, and the fringe areas are made up of any number of small to medium-sized suppliers.

This high degree of fragmentation within the accountancy machine industry makes it difficult to determine within anything more than general lines just which manufacturing companies do what and to what extent. For the usual reasons associated with not wishing to intensify competition, manufacturing companies are loath to spell out exact levels of demand or the extent to which they have been able to build up a market share in any particular specialist area.

Operation

In this country Burroughs Machines—part of the Burroughs Corporation group in the U.S.—has been operating since it first began to manufacture business machines in 1888. This plant in Nottingham, was an extension of the American Arithometer Company—the predecessor of the modern Burroughs—which was formed by the inventor of the first practical adding machine, William Seward Burroughs.

Burroughs Machine, which operates from eight factories in the U.K. employing some 6,000 people, first introduced electronics to its accounting equipment in 1964. Four years later the first major extension of the new technology came via the introduction of its L2000 series, the company's initial mini-computer. Since the 1960s increasingly sophisticated machines have brought new levels of productivity and flexibility through high level language programming and increased memory and processing power.

The company makes no secret of the fact that its latest equipment is a straightforward development of its early adding machines—and equally that the newest models, the small business machines, is where it is now concentrating most of its efforts. The major difference between the visible record computers and the small business machines lies in the latter's memory bank. The former demanded the insertion of some form of card, either punch or magnetic, whereas the small business machine has its information pre-fed on to a disc.

Philips Data Systems points out that the new machines are in reality a simple extension of the conventional computer—and as such are easier and cheaper to maintain and less labour intensive, that is even free of manual demands than the earlier generation of accounting machines, the visible record computer. But perhaps the main attraction of the small business machine is its ability to expand at will.

Depending on the addition and use of peripheral software, the small business machine can, once the basic animal has been installed, be enlarged freely and easily along with the growth and expansion of any business into which it is fitted. Most manufacturing companies provide advice on the best way to site their equipment—and leave room for expansion. In this respect Philips Data Systems, which is part of Dutch Philips Lamps group, is no exception.

Range

The company's range of electronic accounting machines starts with its P300 models. This year Philips Data Systems reckons that its sales are running at best ever levels: in 1976 the company managed to lift production per sales executive by very nearly two-fifths, and during the first six months of the current year this figure is still as high as a third—despite an increase in sales personnel.

This end of the accounting machine market is, however, still largely the province of the bigger manufacturing companies. There are any number of smaller operators, especially in the U.K. where most smaller business machine companies simply market other companies' products.

Oyez group, Solicitors Law Stationery, is a case in point and so is Ozalid along with Office and Electronic. Earlier this year Ozalid accepted a takeover offer from the Dutch group Oce van der Grinten, but it still markets calculating

machines through its subsidiary Calculatronics International (Nig Banda). Adler business machines are promoted in this country by the Office and Electronic organisation.

There are, of course, few areas of business that modern methods of accounting have not infiltrated—even the staid and sometimes Dickensian legal profession has had its commercial practices bombarded by the computer manufacturers in recent years. The latest attack has come from Solicitors Law, the printing, publishing and stationery company whose turnover in 1976 came close to £17m.

Solicitors Law has just entered the desk-top accounting machine market with a machine which, with programming and trading, costs £4,650 excluding VAT, or roughly the annual salary of a top legal secretary.

Little larger than an electric typewriter, the new system will handle the workload of any legal practice with up to 5,000 live accounts. The machine is manufactured by LogAbar and has been programmed to specifications laid down by Solicitors Law which has some 160 years of experience in serving the legal professions. The system is built around a microprocessor and this is the key to its power, low cost and compactness.

Continuous stationary and ledger cards are handled automatically, and it is claimed that the machine can be handled with little or no knowledge of data processing.

Jeffrey Brown



The Oyez LX 2012 Solicitors' Accounting system.

The duplicating revolution

OFFICE MANAGERS can be forgiven for assuming that duplicators are at the lower end of the office equipment market. Their image is that of the inky machine in the corner of the committee rooms, which produces leaflets for the church fete or the local candidate, sloppily and inefficiently.

This image is reinforced by the fact that of all the equipment considered here, the duplicators have changed the least. Innovations in typewriters, word processors and copiers proceeding into the copier market, while duplicators largely remain unchanged.

Reality conforms to the image to only a limited degree. It is true that spirit and stencil duplicators have changed little over the past decade, though there have been modifications which have made them generally cleaner, faster and more efficient printers. But at the offset end of the market, there is considerable scope for innovation.

One of the major reasons why there has been comparatively little tinkering with the spirit and stencil models is because a high value is placed upon their small size and the cheapness of producing copies. Copy volumes are often too high for many of the organisations which will use small duplicators, and copy costs must be kept low. Xerography and offset reproduction is often too expensive to be considered as an option—it is either a duplicator or nothing.

The attraction to the people and institutions who buy such duplicators is obvious enough. But what is the attraction to the manufacturers? Most companies in the office equipment business stress their need for a high volume of sales and a good profit margin: so why bother with spirit duplicators? The market is, in this case, benign. There is a constant need by the users of spirit duplicators for supplies: and most will consume two or three times their capital cost in supplies each year. So there are a number of companies very much in the market: Ofrex and Ozalid still probably taking the lion's share of it in the U.K., together with the Gestetner subsidiary Rex Rotary, and Roneo Vickers.

Stencils are a little higher up the scale: more sophisticated, but still a good deal less so than offset machines, and much less costly to run. Stencil machines are around the £400 to £700 range: once again, manufacturers find them attractive principally because of the supplies they use.

Gestetner and Roneo-Vickers are very much the dominant companies in the stencil market, while there is some importation of Rex Rotary machines. Gestetner exports a large quantity of machines from its factory in Tottenham: a recent report estimated that 55 per cent. of its duplicator turnover was accounted for by stencil duplicators. The company probably has half of the world stencil market.

The market for stencil machines is a large one—because of their cheapness—and has recently received an impetus because of the recession. Managers, especially in relatively small offices, can achieve considerable savings in expenditure, if not in employees' time—by installing a stencil duplicator rather than a copier. It also tends to be a loyal one: customers usually replace old stencil machines with new ones, or are attracted by the more sophisticated versions.

Gestetner especially—moving away from the church hall image—is constantly experimenting with new peripheral devices, as for better copy

registration (allowing for more accurate overprinting), and a few years ago introduced the Faxil for producing high quality stencil masters.

However, the report on duplicators stressed that much of the market was replacement rather than new users—as far as could be determined—and thus forecast a growth no higher than 5 per cent. per annum. With this very much in mind, some of the companies—Gestetner included—have been moved into the copier market, where all agree sales will boom, years to come.

Finally, at the heavy end of the market, we find increasing specialisation. The machines here are produced with professional printers in mind, who have rather more precise and exacting requirements than do office managers. Quality is perhaps the most important criterion.

Gestetner, Roneo-Vickers, Rotaprint, Addressograph-Multigraph and AB Dick all compete in the big-office field, spilling both to jobbing printers and (more importantly in recent years) to in-plant printshops. The strength of these machines continues to lie in the quality of reproduction they produce, even though the gap between their quality and that of Xerox graphic machines has narrowed considerably, especially with the introduction of such machines as the Rank Xerox 9200.

In many ways, it is the high quality xerographic copies which are the competitors of the large printing machine, and this is having the health effect of forcing the manufacturers of the latter to make them easier to operate, to introduce such refinements as automatic document feeds.

Finally, can the "traditional" machines—spirit, stencil or offset—hope to survive the onslaught of the xerographics in the long-term? The answer is, probably no: growth rates projected for all the traditional machines tend to decline into the 1980s, though it is obvious that there will still be markets especially overseas.

John Lloyd

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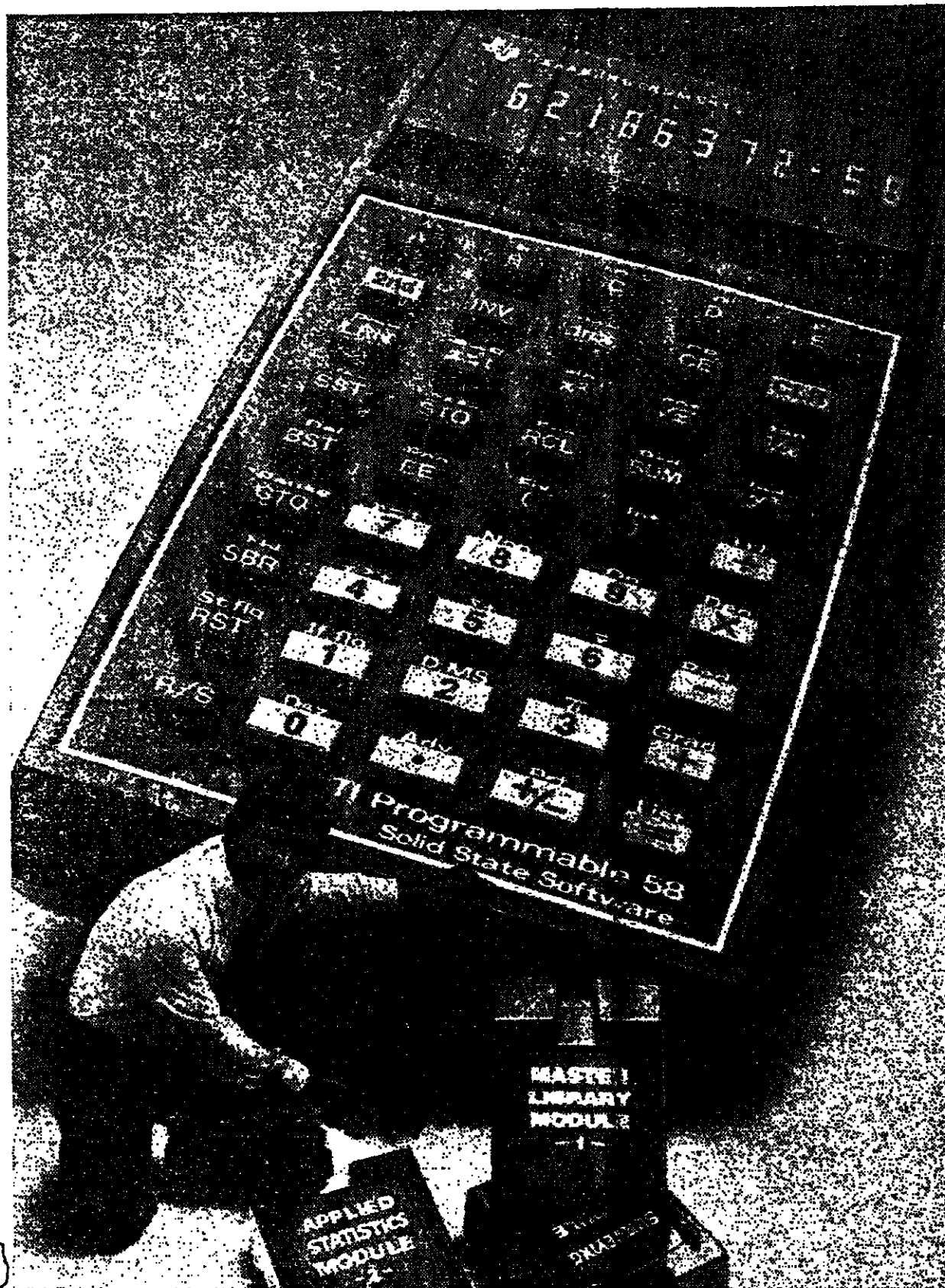
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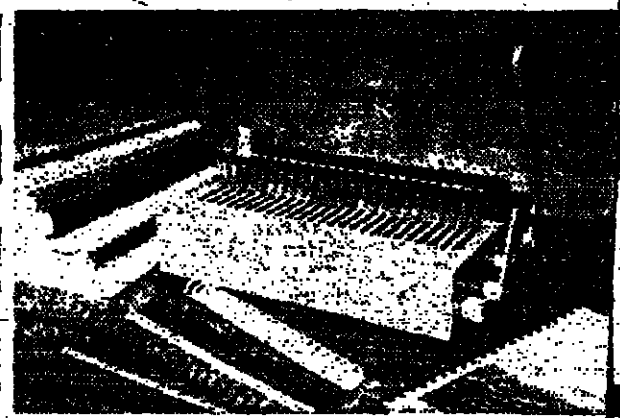
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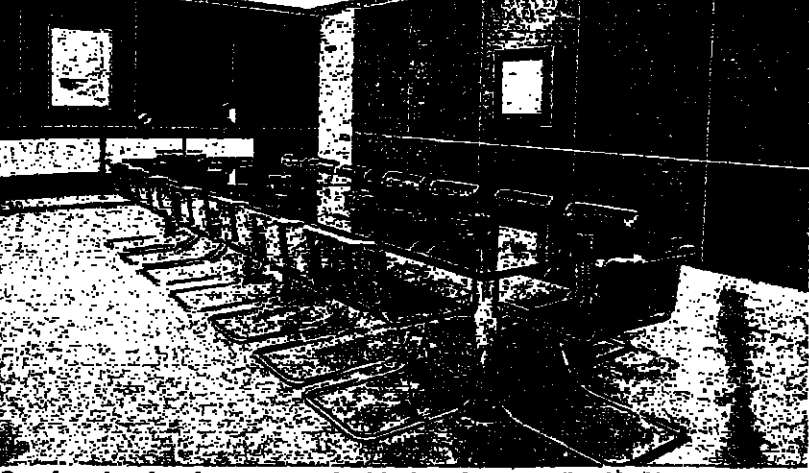
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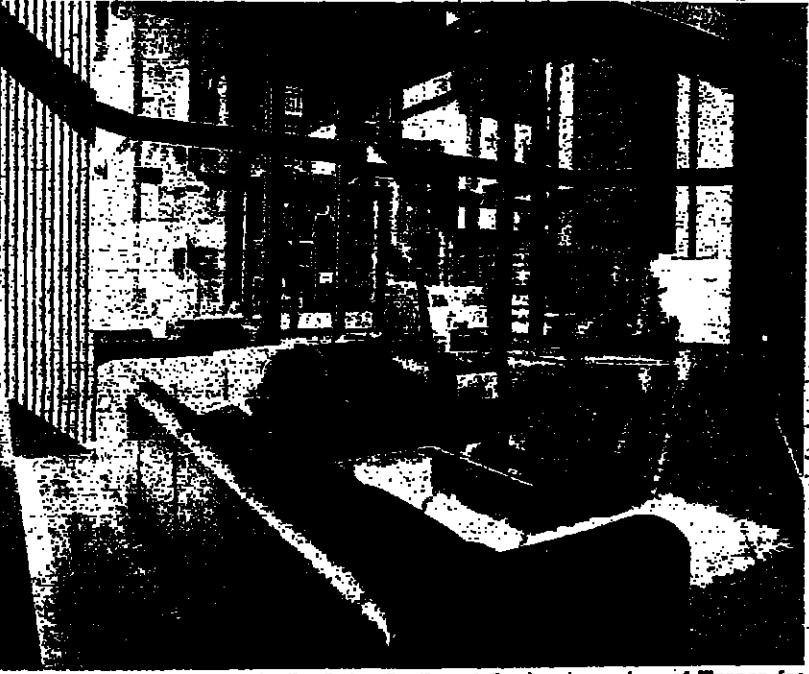
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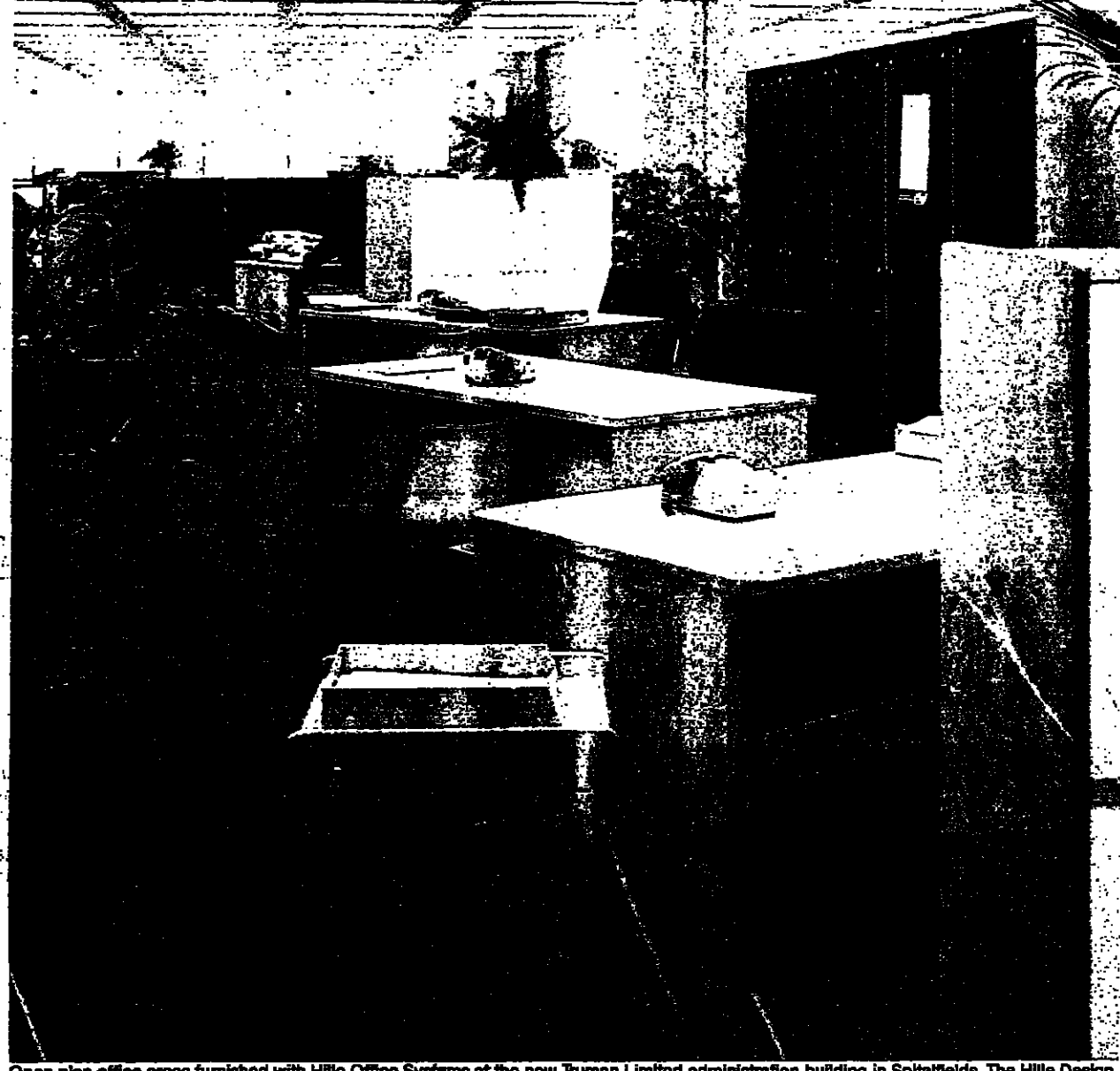
The Hille Group of Companies.



One of a series of conference rooms furnished by Form International for Merchant Bankers in the City. Illustrated are the MR chairs designed by Mies van der Rohe whose furniture is exclusively made in the U.K. by Form.



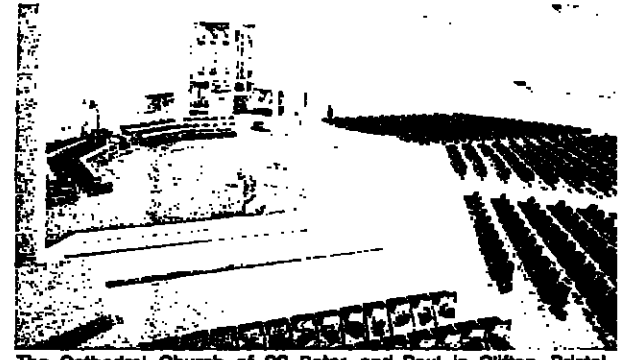
Reception area furnished with Hille Dolce Seating at the headquarters of Finance for Industry on London's South Bank.



Open plan office areas furnished with Hille Office Systems at the new Truman Limited administration building in Spitalfields. The Hille Design Unit were responsible for office planning and layout in conjunction with Arup Associates, architects for the entire project which has just won the Business and Industry Award for the Environment.



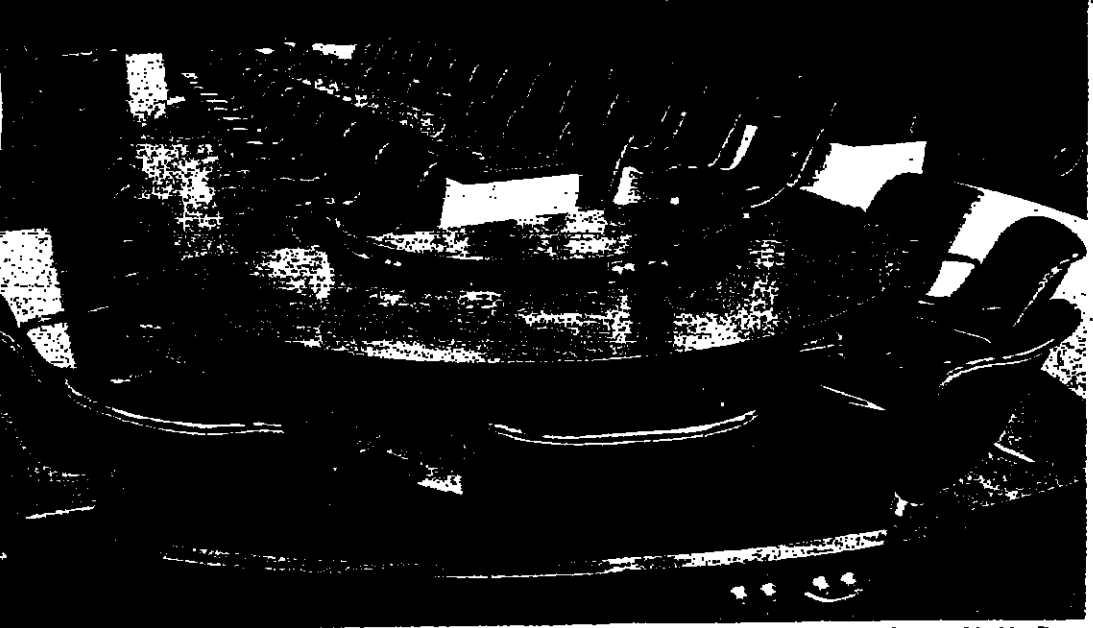
Cafeteria at the offices of Coca Cola in Zurich furnished with the Saarinen range, available from Form International in the U.K.



The Cathedral Church of St Peter and Paul in Clifton, Bristol. Congregational and altar seating was provided by Hille. Special fittings were designed to hold missals and hassocks.



Hille has long-standing licensing links throughout South America for HOS and other products. Illustrated is an HOS installation in Sao Paulo, Brazil.



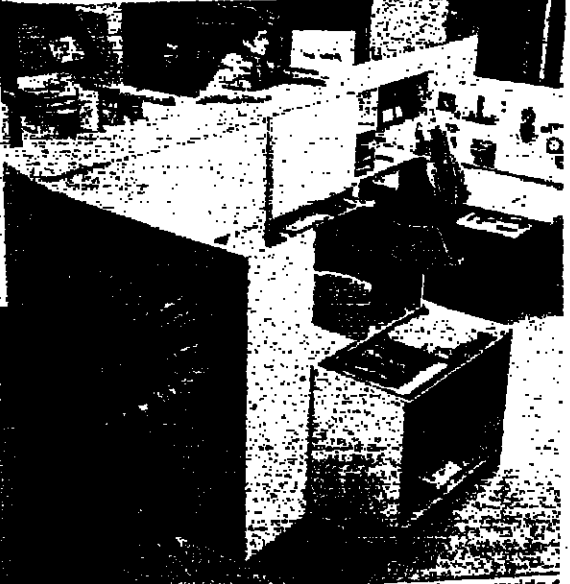
Conference Chamber at the International Sugar Organisation in the Haymarket. Specially fitted seating provided by Form International. Interior Design - Stefan Buzas and Alan Irvine.



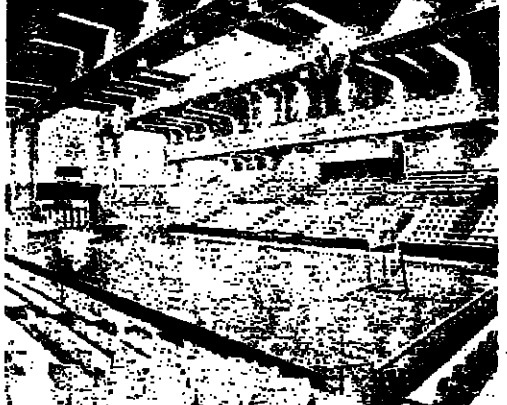
International headquarters of the Dr. Pepper Company in Dallas, Texas, furnished with the Stephens Office System, as manufactured in the U.K. by Form International.



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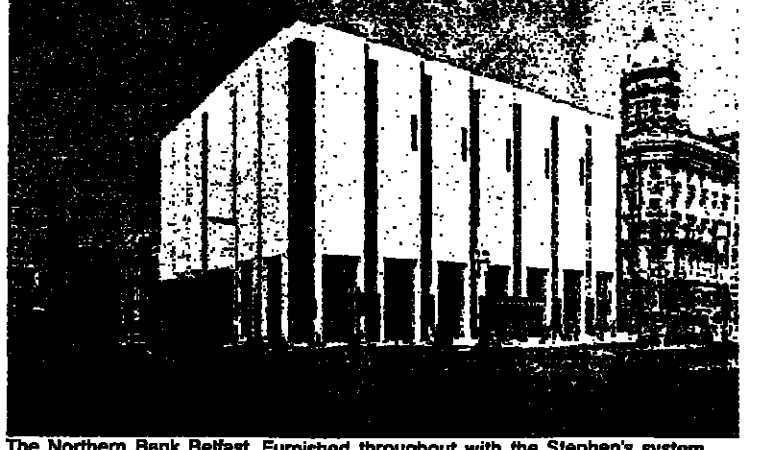
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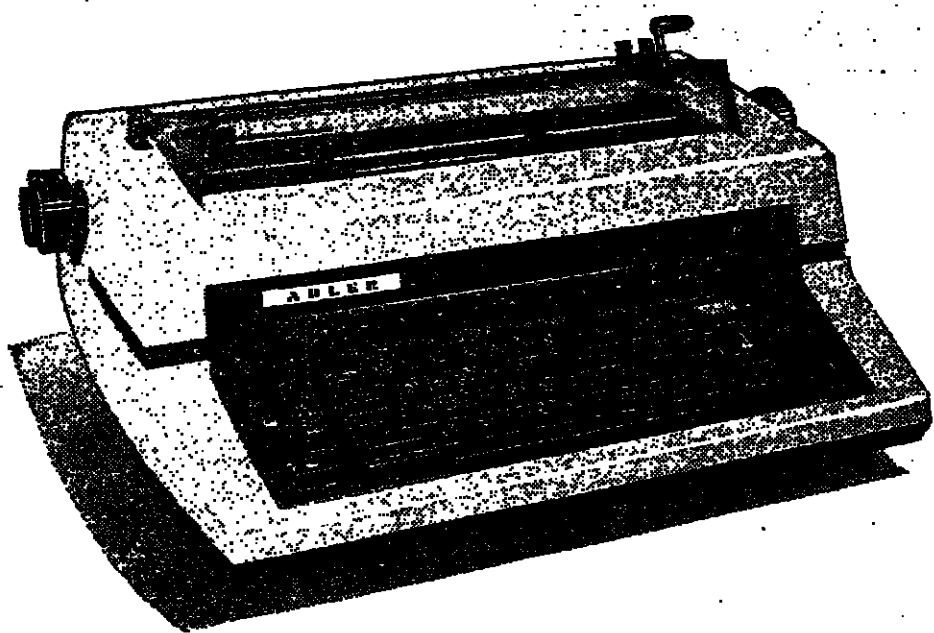
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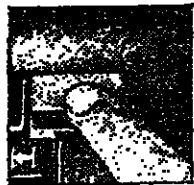
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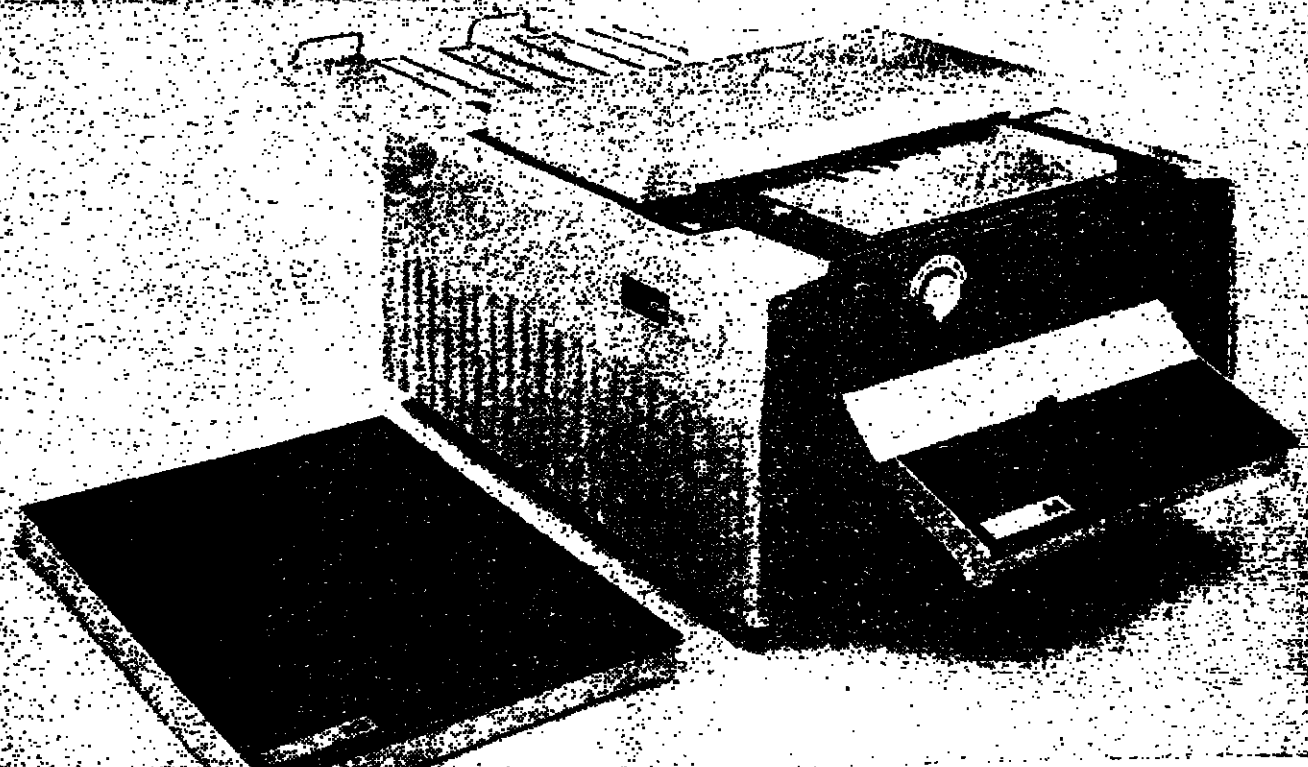
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OFFICE EQUIPMENT VIII



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Copiers thrive on competition

ONE OF THE odd things about the copier market is that the consumer appears to have benefited both from the monopoly of Xerox and Rank Xerox in the 1960s and from the subsequently fierce competition.

Xerox's worldwide monopoly, protected by patents for nearly two decades, allowed the company to develop a market which few people envisaged would grow at such a spectacular pace. Relatively high prices allowed Xerox to build up an impressive service network and to finance a huge research and development programme to produce the second and now even a third generation of machines. Undoubtedly the high quality of modern copiers has depended partly on this research effort.

Then, at the end of the 1960s, when customers were beginning to be restive at what many considered to be over-high prices, competitors started to move in aggressively with machines which were in some cases much cheaper, and in some applications offered superior facilities.

For longer runs and higher quality, Gestetner and Océ can both offer a combination of copier and offset litho printer. The copier can make a plate which is used to run off almost unlimited copies on the litho machine.

Challenge

Perhaps the most spectacular challenge came from Japan where Mitsubishi and Ricoh successfully attacked the lower end of the market with low-priced machines for sale rather than rental. They compared favourably in quality with anything offered by their giant competitor.

Japanese machines marketed by Kalle and Nashua in the U.K. have been joined by good quality machines designed and marketed by other office equipment companies who realised that they must swim with the tide of convenience copying or risk being overwhelmed.

Five years ago there were only five models of plain paper copier on the market in competition with those of Rank Xerox. Three years ago, there were 16, and now there are more than 30. Some of the newcomers, like the equipment made by Océ van der Grinten, the Dutch company which recently took over Osalid, and a new machine from Gestetner, make very high quality copies. As a result of the competition, Rank Xerox's share of new placements has fallen from about 90 per cent. to about 30 per cent. However, since competition has approached from the smaller end of the market, Rank Xerox's share of new revenues is probably more like 60 to 70 per cent.

One of the main questions for the future, therefore, is whether the competition can make a significant inroad into Rank Xerox's still dominant position in the field of large high volume copiers and the copier-duplicator.

So far, there has been no significant challenge from the Japanese to the machines capable of more than 15,000 copies a month. The Ricoh machines, for example, are thought to be averaging about 6,000 copies a month in the U.K. although they are capable of considerably greater output.

By comparison, the Rank Xerox copier-duplicator, the 9200, can achieve 100,000 copies a month, and brings in correspondingly greater revenue.

In the copier-duplicator market for machines capable of 30,000 to 50,000 copies a month the main fight appears likely to be between Rank Xerox's 3600 and 7000 families and the IBM copier 3, with the East-

man Kodak Ectaprint 100 entering the market possibly towards the end of next year.

So far, IBM's progress has been steady rather than spectacular. Prices in the U.K. have been somewhat higher than Rank Xerox's, and the company appears to have been

The copier-duplicator market is also being attacked simultaneously by technical developments of rival systems. Gestetner, for example, now has a system by which facsimile stencils can be made of original documents. A large number of exact copies can then be run off cheaply on a conventional duplicator without the need for a typist to cut stencils.

For longer runs and higher quality, Gestetner and Océ can both offer a combination of copier and offset litho printer. The copier can make a plate which is used to run off almost unlimited copies on the litho machine.

This system offers a real challenge to the 9200, through high quality and relative cheapness. On the other hand, the Xerox system offers greater convenience and it does not require a skilled operator as an offset machine does.

Stockbrokers Scott Goff and Hancock, who are currently preparing their next report on Rank Xerox and the Office equipment market, estimate that so far, 3,000 of the "9,200" machines have been placed.

This is a slower rate of penetration than Rank Xerox originally hoped for, but on the other hand, Scott, Goff say that there is strong evidence that users are well satisfied with the system.

The main question now is whether rivals to Rank Xerox and IBM can bear the very high development costs required for an attack on the top end of the market. It is thought, for example, that the Ricoh machine, which uses a liquid toner, could not be developed



The Gerafax X-10 Plain Paper Copier.

to achieve the very high speeds needed for the faster copier duplicators.

The other difficulty facing any new aspirant to the top end of the market, is that the larger and more complicated the machines become, the more important is servicing. The Japanese, in particular, have done well by selling basically reliable small machines which do not need very much servicing. At the higher end of the market, they would find it very hard to compete with the efficient service network built

Much of the current development work appears to be concentrated on the smaller machines where it is believed a system called a photo receptor belt could eventually reduce prices by as much as half. These new machines are expected to have a significant impact for the next two years, so, but when they do an exciting new turbulence can be expected in this already swift moving market.

M.W.

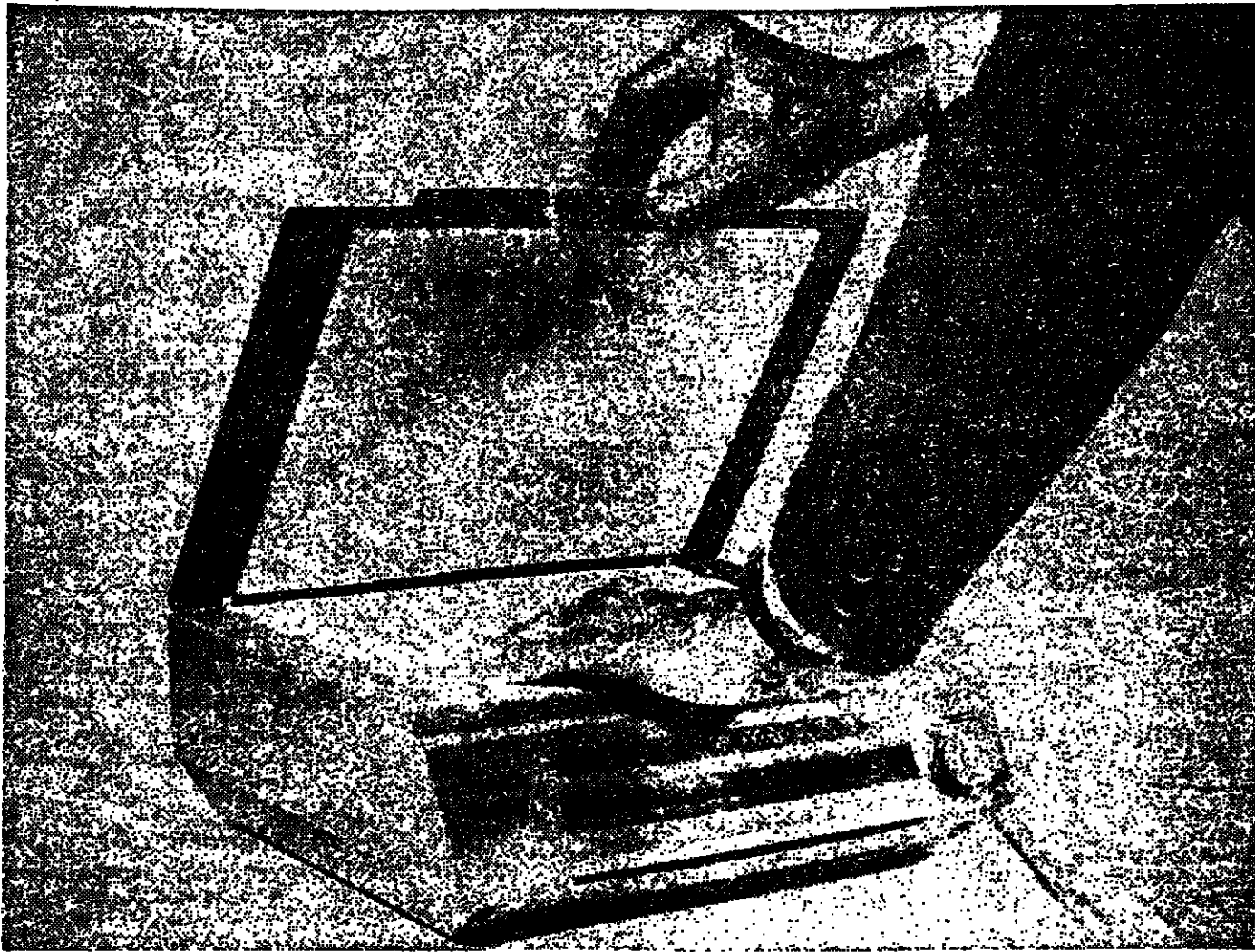
NEW MAXPAX SOLVES BILL'S DRINK PROBLEM.



Thinking of
computer?

TALK TO U

OFFICE EQUIPMENT IX



The 3M Scotch copier.

Colour copiers about to appear

THE LAST few years have seen rapid innovation in the copier market, as more and more firms desert the carbon copy for the duplicated copy on short runs and then seek improved quality of copy. At the higher quality end of the market, there are a number of machines whose speed and reproduction quality challenges the offset litho machines. More dramatically, perhaps, the first colour copier is on the verge of being marketed.

First, colour. The breakthrough into colour has been made by Rank Xerox, which still dominates the European copying market. Two-and-a-half-years ago, Rank Xerox selected a number of diverse companies, and leased them the Xerox 6500 on an extended trial basis.

Among the companies selected were Shell, Unilever and the British Steel Corporation, together with large advertising agencies and design workshops. Both customers, and Rank appear well pleased with the results of the trial.

The Xerox 6500 has four colour-selector buttons — full colour, yellow, magenta and cyan (light blue). Full colour, obviously, will reproduce a colour likeness of the original. The individual colours are selected if, as is often the case, the operator wants a number of copies of a document with the type in blue, or red. The buttons can also be pressed in combinations to give an effective choice of seven colours.

The machine has the advantage of using plain bond paper, and can reproduce from opaque, translucent or transparent originals with no minimum limit on their size. It has the disadvantage of being relatively slow, compared to the black and white machines. You have to wait over half a minute for the first idea of the potential size of the



An Xerox 2000 plain paper copier in use at Bartlett's Bookmakers in Tipton, Staffs.

copy of a full-colour run, and 30 seconds for a one-colour run. There are also problems about the very efficiency of the machine. Its reproduction is accurate enough to make a re-

produced banknote appear genuine on casual handling. In an attempt to pre-empt the office forger, Rank Xerox insists that the machine is kept continuously locked when not in use, and that the keys are kept with a responsible person at all times.

Rank Xerox says it has no over half a minute for the first idea of the potential size of the

of success, and their usefulness to the office, it is necessary to consider briefly the arguments and assumptions employed by the manufacturers and distributors of copiers, which in turn determine their market strategy.

Perhaps the dominant "philosophy" in the office and business equipment trade in the 1970s is that of the integrated office: where office machines surround the office workers, and where the functions of typing, storing, copying and transmission of messages within the organisation and to other organisations outside are gathered together within arm's length of a secretary. Much of the research and innovation currently being carried out by the large office equipment organisations—IBM, Rank Xerox, Gestetner, Olympia, Olivetti—are proceeding with this rough model in mind.

Some companies—as Olympia, Nashua and 3M—almost wholly confine their output to desk-top copiers, stressing the appropriateness of such machines to modern bureaucracies.

The large machines manifestly do not fit into this perspective. They are too big, and often too expensive, to proliferate in any but the most grandiose of organisations. They are thus unlikely to be sold or rented in very large numbers, and often are used by companies who have a printing plant within their organisation, to supplement or replace an offset litho machine.

Nevertheless, their speed and convenience—especially their ability to copy any written or typed document from the original—seem likely to ensure them a market.

The major competitors in this field at present are the Rank Xerox 8200, the IBM Copier III and the Kodak Ektaprint 100 and 150 range. Of these, the Kodak machines are not yet available in the U.K.: the placements in America are still completing trials.

The features these machines offer are their ability to do long runs—they are designed for users who want 30,000 plus copies a month. They offer automatic document handling for the little 8/60 in close on £250 for the largest and swiftest machines. The cost per copy is around 7p.

Other manufacturers—naturally enough—tend to discount Rank's claim that the 6500 is the sign of the future—though IBM, for example, which has no colour duplicator, admits that it will have to get into the market soon.

Facilities

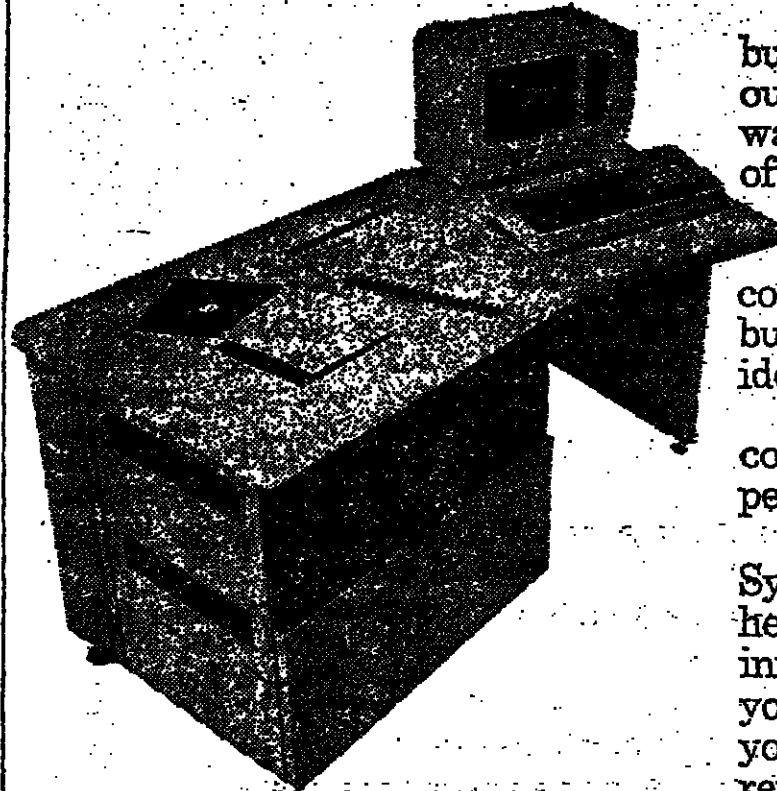
What the other companies see as the acme of their range are the high-speed, high quality copier-duplicators, offering such facilities as reduction, re-enlarging document feeds and automatic finishers.

These machines are for the user who frequently wants comparatively long runs: they are thus eating into the area which has up to the present been regarded as the preserve of the offset lithography machines. However, since they can also be used economically for short runs, they have an added advantage.

To assess their future chances

J.L.

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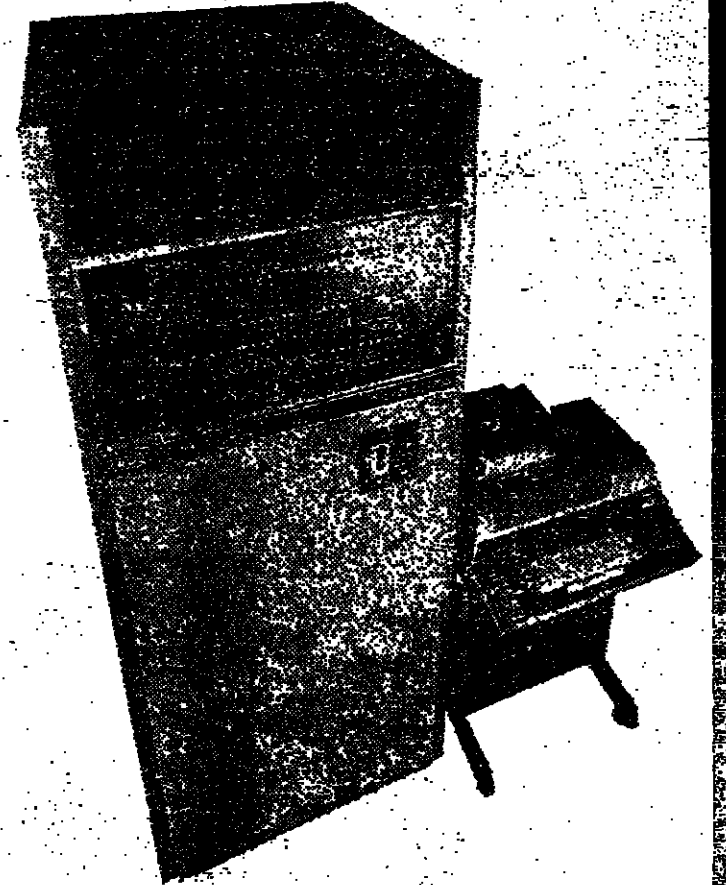
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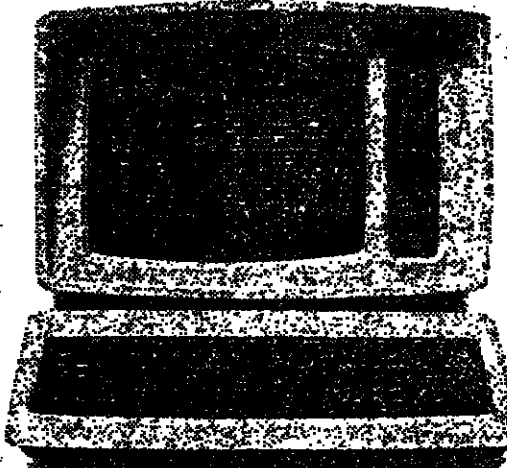
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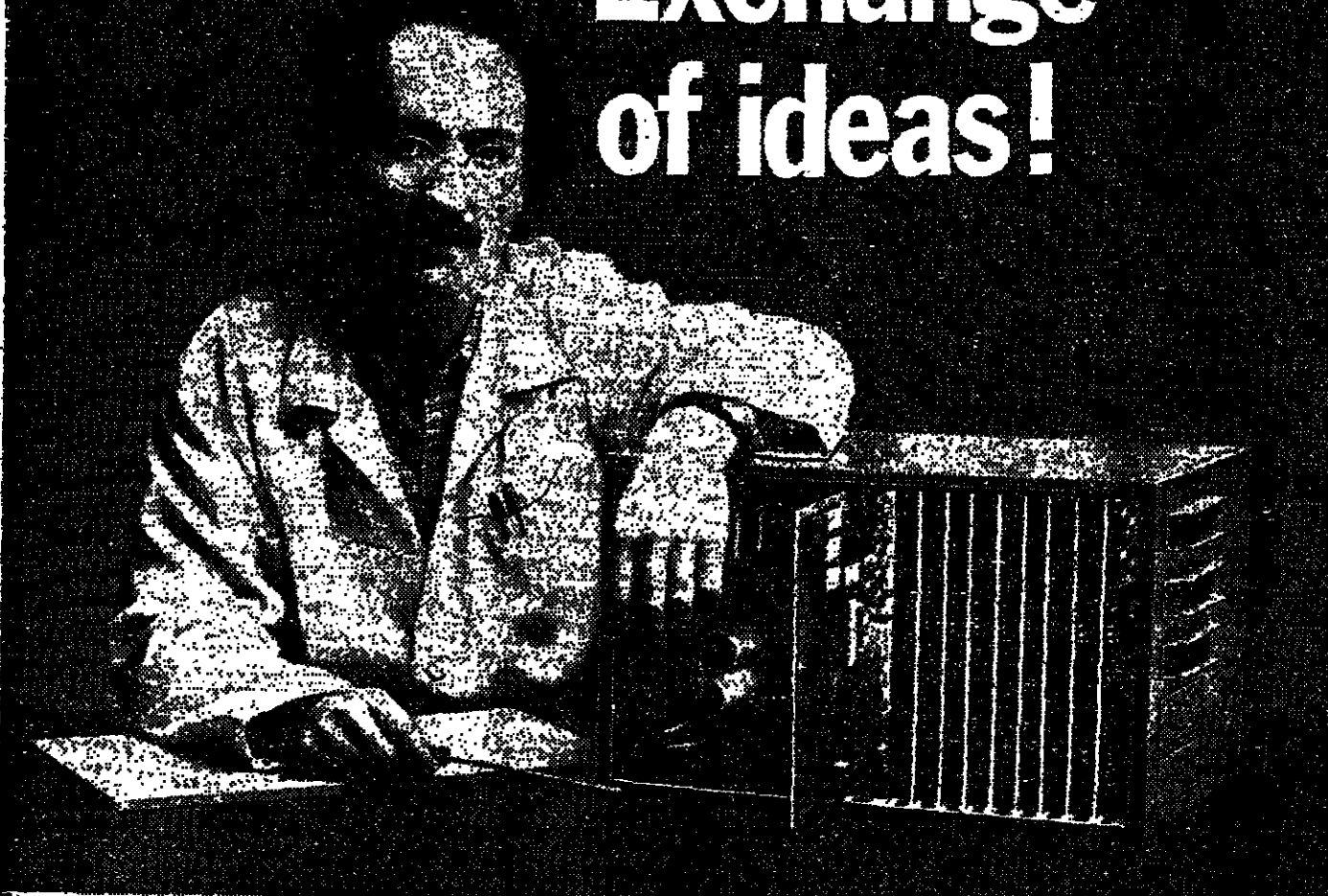
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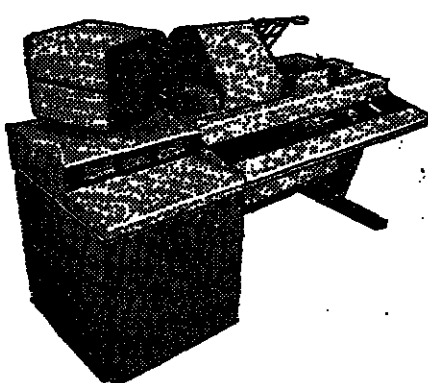
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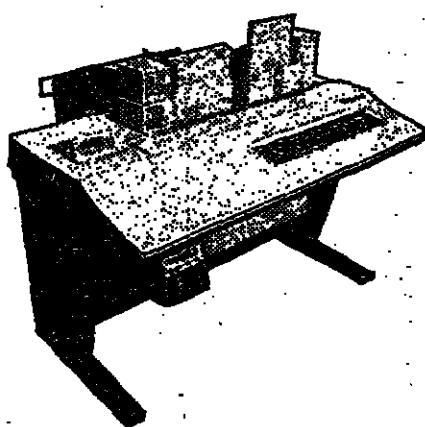
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OFFICE EQUIPMENT X

Wide variety of peripherals

BECAUSE OF the advent of the microprocessors which add intelligence of a sort to the equipment into which it is connected, the definition of a peripheral unit—that is peripheral to a computer—is becoming very difficult.

It is now possible to buy what looks like a TV screen with a typewriter keyboard and, plugging it into a 13 amp power point, find that one has a personal desk-top computer able to handle much of the work that ten years ago would have had to be undertaken by a big machine. In this category belong the 'Pet' personal computer presented a few months ago, the 'Jacquard' Video-Computer supported by Computer Ancillaries (CAI) and probably IBM's (just) portable computer.

Even further down the scale are the calculator-like stock data capture units which are designed to record goods depletion in large stores and warehouses. They would not normally have a microprocessor though a recent model backed by Unilever's computer services is driven by one—and are equipped to release their accumulated data over telephone lines via an acoustic coupler to a central stock control and order preparation computer.

Possibly the best way of describing types of peripherals that could be encountered day by day in offices is to consider the kind of services it is possible to conjure up through them.

Building

For instance, in the offices of large building groups, civil engineers or architects, it would not be surprising to find a display and keyboard, or a plotter and a communications printer which can be linked over Post Office lines to one of a number of centres which provide computer assisted design support. Set-up in Cambridge some ten years ago with Ministry of Technology backing, the Computer Assisted Scicon bureau consultancy has spent a fortune in running the Treasury model of the British economy

developing standard programs which a group of backers has which allow a designer to put been manipulating with some in outline ideas for a bridge startling results. Highly specialised terminals by Ferranti-Cetek can be used by circuit designers to turn a rough outline drawing into the finished artwork ready for the production of the corresponding circuit board.

Another peripheral that may be encountered in some specialist office over the next few years could be the measuring unit—or the receiving unit—for one of the most ingenious pieces of electronic equipment devised this decade. It is in effect a 3-D copier which will follow the curves of any shape, including some not mathematically definable and reproduce them exactly. The measuring end is a laser interferometer which transmits measured angles and distances to a small computer. This is programmed to operate two lasers which in-



The IBM Office System 6 provides word processing and information processing capability.

intersect at a point corresponding to the one illuminated by the measuring laser—at that moment. It follows that as the latter describes the contour of the object, so the intersecting slave beams must follow suit.

The ingenuity of the reproducing device lies in the fact that to make a permanent record of the measured shape it uses otherwise transparent material which is affected chemically only where two laser beams of differing colours intersect.

Device

The measuring device could be in an engineering centre in London and the reproduction unit in Canada; the computed information being transmitted over cable or satellite links.

Again, can one call IBM's Office System 6 a 'peripheral' covering as it does a number of units between magnetic card typewriters and the small computer? They can be combined to form office work stations with ability to turn out high quality documents from reports to contracts, taking on letters as a matter of course. But such work stations can report statistics and other data to computers and take instructions from them, and do the same with communicating typewriters at some distant point. To that extent even the complex systems that can be built up from IBM's OS-6 equipments—which include one of the most accurate ink jet printers ever designed—are peripherals.

It predicts that the European peripherals market will reach around \$200m or 70 percent of the total value of computer sales by then prove to be correct then there will hardly be an office in any major city without one type of peripheral or another. And this does not take into account the possibilities of Teletext or Videotext, whose local TV screens may be considered as peripherals of the data bank controllers operated by the television authorities and the Post Office.

Ted Schoeters

Computers for the smaller office

IN TEN years' time it is very likely that most of the functions of medium to large-scale computers now used in the control and running of businesses from a central point will be taken over by small computing installations set up in offices at key points, and operating on events as they happen.

They will communicate the daily, hourly or instant results of their work as the case requires to a head office computer. In many instances they will have the ability to take over the tasks of another machine in the network in the case of failure, so that at no time will the users be totally bereft of computer power, as can happen now if a large central installation is affected by cable damage or sabotage.

One of the reasons for the rapid growth in the use of small local machines is the reduction of management control over centralised data-processing systems as these have become more comprehensive and—possibly—this return to greater simplicity is a management reaction to the dangers of an organisation becoming totally computer-dependent where there is a single octopus-like system running everything.

Clear

That is a moot point. But one thing is very clear—many people are beginning to question previous assumptions about the need for centralisation and large integrated systems and are prepared to scale down projects and duplicate equipment now that the small mini and the micro-computer driven devices are constantly reducing the cost of computation. Citibank in the U.S., which is replacing a very large central processing facility with hundreds of small machines, is a case in point.

For about £20 it is possible to buy a pocket calculator which will happily calculate monthly mortgage repayments for as many years ahead as required on the basis of standard information and at a touch of a button. Similar scientific machines will handle complex routines together with a certain amount of programming power.

Yet this equipment is based on three to four year old technology. So it is hardly surprising to read predictions that when the micro-computer begins to be used for processing activities having few or no tried sources many of the functions now carried out in central computer areas will return to the offices where the process data originated.

It will not be essential to retain a large central data base. Memory technology is advancing so fast that every office in the large organisation could ultimately have a 'memory cell' containing constantly updated information concerning its work.

But central supervision of local data bases will be required as will decisions on levels of confidentiality.

In the meantime it is already possible to get for not much more than £1,000 a micro-processor-based unit that will provide invoicing or stock control as required and for, say, £8,000 a fully capable ledger control unit.

Manufacturers of general about, so far as micros are purpose machines will be quick concerned, the emergence of to point out that they can meet specialist services such as the

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British exporters lag behind

WITH OVERALL exports of office equipment amounting to around £670m. last year compared with slightly under \$600m. in 1975, the British industry is apparently making use of the period of domestic recession to look for sales abroad, but it is clear that in some sectors it is lagging behind foreign competitors.

In addition these figures, when seen in terms of inflation, do not reflect the export growth rate which could perhaps have been attained. For that and other reasons both Government and industry are now looking into the problems.

The British industry is highly involved in world markets and its product range bears comparison with any other except the U.S. and Japan. Although there are prospects for a continuing strong increase in world demand for office machines confidence about the home market is less buoyant.

According to a sectoral working party study carried out under the National Economic Development Council, it is felt that the U.K. office machinery manufacturing industry is now facing crucial choices in some sectors if it is to survive at a level other than that of a provider of products at the low technology end of the market, or of an assembler of machinery with higher import content and a low U.K. value added element.

According to the working party report, published late last year, the part of the industry involved in the manufacture of traditional electro-mechanical products has maintained a good market position.

Reasons

But in the fast growing electronic product areas the U.K. owned companies have lagged behind foreign competition. The reasons for this are probably the high cost of rationalisation to electronic products and the recent economic environment in Britain, which has not been conducive to small, highly

multinationals which are abreast of the technology have indicated that they are unable to depend on the U.K. electronics infrastructure.

To compound the problem, where link-ups between manufacturers of traditional products and "electronics know-how" companies may be most advantageous there is often no British owned electronics company of any significant size which can fulfil such a role.

Objectives

It is further suggested that on present trends the ability of the U.K. office machinery manufacturing industry to meet any sectoral objectives that can be put forward will rest to a considerable degree in the hand of the foreign-owned multinational companies already operating here. They, in turn, have indicated that any further investment in Britain will depend on improvement in productivity.

Looking at export potential by sector, the picture is no more encouraging. Although the reputation of U.K. stencil duplicators remains high, this is a fairly static market, and although export growth may be above world market growth, it will be relatively slow. A similar outlook is seen for offset litho machines.

Typewriters, now produced in Britain solely by foreign multinationals, could achieve sufficient growth in exports to attain double the average rate of growth assumed in the objective, but one impediment is the pace of development of the automatic typewriter and word processing markets. These are likely to be subject to explosive growth in the years to 1980, but the report warns that at present the British industry is ill equipped to benefit from it.

Although some British manufacturers of electronic calculators have managed to achieve a reputation for quality products and to compete effectively in

world and particularly Western European markets, it seems unlikely that more than a modest increase in exports in value terms will be achieved by 1980.

Accounting machines, on the other hand, are seen as a product group which could make a significant contribution to the all-industry objective. Similarly the SWP felt that in the years to 1980 there will be a good market opportunity for expanded British manufacture of basic electric cash registers since a large market demand is currently being met by imported products, particularly from Japan.

Exports of document copying equipment exceeded imports in both 1974 and 1975, and based on estimates of a possible increased worldwide demand for copiers of around 35-50 per cent. by 1980, it is likely that U.K.-based companies can make a good contribution to the export effort.

Overall, it is suggested that the industry should seek to reduce the level of import penetration to around 65 per cent. its level in the late 1960s. Assuming a 20 per cent. increase in the U.K. consumption by 1980, this objective would require increased production of about £18m. at 1975 prices (£9m. for import substitution and £9m. for growth).

The attainment of both the import reduction and increased export objectives would, if total home market demand were to rise by 20 per cent. by 1980, require an extra £100m. a year production in the terminal year at 1975 prices. This in effect means that production would need to rise to £280m. at 1975 prices, a 60 per cent. increase.

This outline for the industry, although apparently difficult in terms of its goals, is likely to become, with modifications, part of the Government's overall industrial strategy which will be outlined in the near future when all the sectoral working parties have reported.

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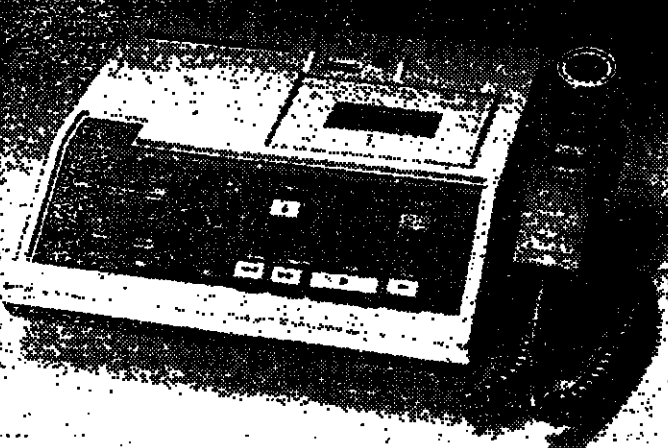
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CONTINUED FROM PREVIOUS PAGE

Microsoft centre set up by Computer Analysts and Programmers (CAP), to allow any business intending to use micro-based equipment for god business applications to work out all the routines it will have to do beforehand.

It is also prompting makers of micros, Zilog for instance, to develop working kits of parts that will allow users to design their own routines and try them out till they operate perfectly.

The head of the CAP organisation in Britain, Alex d'Agapeyeff, is, in fact, going so far as to say that micros are already overtaking the main business data applications and that it is virtually impossible to make a neat price classification any more. One of the main reasons he adduces is that micros are proving easier to operate with widely employed computer languages than several of the minis, largely because of the availability of solid-state memory which appears tailor-made for micro operations.

d'Agapeyeff, who is not given to forecasting unless he is pretty sure of the base, predicts that most of the micro makers will be launching their own small business systems within the not-too-distant future and at prices which will make the minicomputer builders shudder, let alone the builders of general purpose machines.

In the meantime, however, the battle between the emergent minis and the larger business machines continues. And the minis are winning, with shipments growing faster than for any other sector of the computing market. Unable to beat them the traditionalist large machine makers are joining and every one except, perhaps, ICL has brought out a mini/very small business system of its own.

It is hard to discern where all these developments are leading. One point seems clear however. If computer power, particularly as used by the big service organisations, returns to the local offices, the perpetuation of infuriating mistakes should become impossible. Most people have their pet "blame the computer" stories, many of which are unfortunately true. If invoicing for services rendered takes place locally, mistakes are far more quickly pinpointed and personal intervention is much more likely to have a lasting effect than if the offending computer centre is miles away.

One effect of the small, comprehensive machine could thus well be a return to far greater sense of responsibility.

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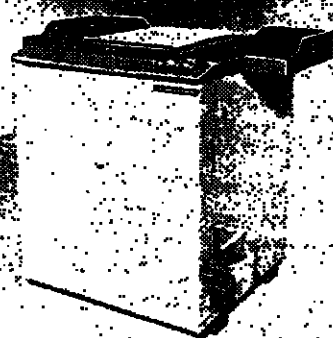
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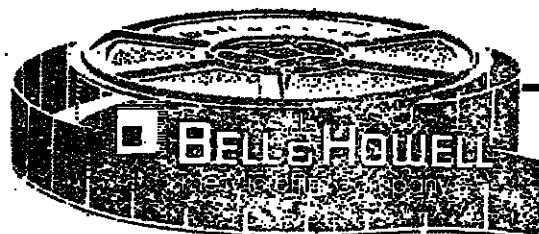
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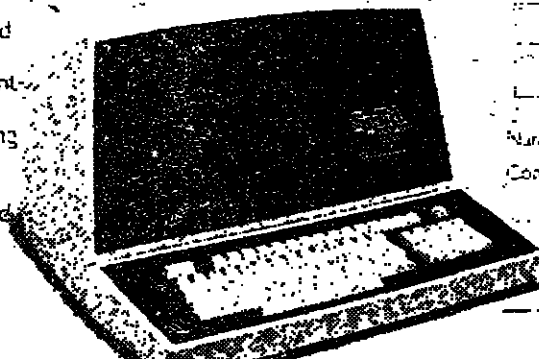
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OFFICE EQUIPMENT XII

Survival of the large computer

LOOKING AT the present rapid changes in technology, and reading the many predictions that large computers are on the way out, office managers in companies where centralisation of all accounting and operating functions around a bigish general-purpose machine has been carried out — often after major upheavals within the organisation — may understandably wonder where the technologists are heading.

The latest available statistics show no let-up in deliveries of mini-computers in the notional price range of say £2,000 to £20,000. From a delivery basis of \$2bn. by U.S. manufacturers in 1976, itself 36 per cent. up on the preceding year, this year's figures are expected by IMC Europa to advance 40 per cent. to \$2.8bn. and to continue this headlong progress to a total of \$7bn. by 1981 at which time 200,000 units will be shipped.

The organisation underlines the changes which have taken place in the minis themselves and defines three classes in these machines. There are micro-minis which are likely to be built up around one or more micro-processors; standard minis of more traditional construction up to about £15,000; and super-minis which will have fast memories and extensive software and will be capable alone or in a small network to take over at lower installation and operating costs all the functions of large standard machines.

Analysis of end-users shows that one third of this year's shipments will be for commercial data processing (10,160 out of 29,020) moving up to one-half by 1981 (34,700 out of 67,800). At the same time there is a most significant figure for shipments for large system support which is this year about 7 per cent. of the total (2,030) rising to 10 per cent. (6,000) in 1981.

Earlier this year Peggler Associates had drawn attention to the changes at the top of the market, observing that while large commercial machines still dominated the industry at 66 per cent. by value of all installed systems, this position was being steadily eroded. In 1975 a peak of 4,938 had been reached in Britain and in 1976 there were more withdrawals than new systems.

Peggler sees the smaller machines with costs below £150,000 as bearing the brunt of the attack, which is three-pronged — from minis of course, from intelligent terminals supported by a larger machine and from service bureaux. And it observes that nevertheless the big systems are getting bigger, or more powerful and concludes that the key factor in the future of the large central machines will be the evolution of communications.

Jean Vancher, director of the Diebold Research Program—Europe goes a stage further. In a recent trend analysis he underlined the just growth in the installation and use of on-line terminals as opposed to batch and asserted that within two years 50 per cent. of medium-sized computers would support real-time/teleprocessing operations.

Some consequences for management are that computer operations could become less quantifiable since much of a computer centre's load would come in a random fashion. Load planning is thus going to be more difficult.

Competence

At the same time, the competence of the computing centre will increase by leaps and bounds because of the new operational modes the equipment will be called on to support. A corollary would appear to be that unless such a challenge is forthcoming within a company, staff will go where it is offered.

The nature of business computing has thus changed and users no longer think only of work capacity of the central processor but also of the ability of the whole array to handle large numbers of terminals concurrently and inexpensively. This does not mean that all large machines of this type are obsolete, merely that their function has changed from general purpose computing, or the ability to do all kinds of jobs albeit inefficiently in some instances, to carry out a limited number of tasks for which the machines are particularly suitable.

So, after a period of intensive centralisation and some restructuring of information flow, the movement is in the opposite direction towards distributed

processing. But because people have learned how costly precipitate moves in this can be, progress is likely to be cautious and steady.

It is pertinent to ask what the makers of larger machines are doing about this trend. Well, there seems to be no let-up in new product announcements, though whether all are new machines or some are "cosmetic jobs" is a moot point.

Management will continue to be under pressure to replace, enhance or upgrade and, more and more, to move towards a mixed supplier situation in which one company provides the mainframe and another the peripherals—presumably under better leasing or rental terms and offering improved performance. Telex, BASF, Harris and CDC are all active on the IBM installed base front and their efforts are likely to intensify.

One development which has had little effect on Europe so far but undoubtedly will have an influence from now on is the emergence of competition for the established central processor base of IBM with Amdahl/Fujitsu going for the top vide machines and Intel/Hitachi for medium to large-scale units. Amdahl has a marketing base in Europe and for Intel it can only be a matter of time. Control Data has its Omega processors which also are replacements for IBM roughly in the mid-range.

Because the IBM base is so large, it is quite possible that further contenders will appear—possibly supported, like Intel, by one or other of the large semi-conductors manufacturers.

It is inevitable that IBM users in Europe will look at alternative processors. A recent survey of a group of 168 and 158 users in the U.S. showed that only 3 per cent. were so convinced of the gentle giant's infallibility that they had not contemplated a change. Some 65 per cent. had taken the step of evaluating and of these 23 per cent. had decided to move, while 61 per cent. would stick.

It would be rash to conclude a swing of 16 per cent. out of the top-end IBM machines is imminent in the U.S. But Ford is taking and Amdahl 470V/6-II rather than an IBM 3033 as replacement for its 370/165 because Amdahl "Offers cost

savings and can be delivered sooner."

With the power of two Japanese groups behind the Amdahl and Intel will go a long way. And IBM will be under increasing pressure to match price and delivery with the other competitors as the goes by. Indeed, the new announcements from IBM contain some cost surprises.

This can only be good if users if it means improved service and overall expenditure held down longer. But if causes faster obsolescence it is a point to watch closely.

Bureaux

One significant development over the last year has been a setting-up by a number of bureaux of a service to us which in effect absolves a latter of practically all effort. It operates somewhat like a turnkey approach with a difference that the bureau Computer or UCE for instance will look at the user requirement, install a 10 unit and link it to one of the large central machines. They have a great deal of processing power and immediately take over the service of a repertoire of programs in other circumstances. They have taken their years' possibly hundreds of thousands of pounds to acquire by themselves.

This hands-off approach computer use may seem a bit strange at first sight, but as companies producing sophisticated products in the U.S. have adopted it, preferring to let the handiwork of run machines and ensuring a constant service to people who have been in the job for a long time and know how to get the most out of every piece of equipment they buy, or lease. It is unlikely, even in long term, that people will offer processor equivalents, companies other than IBM, the pace of development electronic engineering is such that undoubtedly these machines will come under attack much sooner than the manufacturers would wish.

Blossoming audio visual market

ONE OF the busiest areas of development in electronics during the past five years or so has been by engineers who have sought to make communication between man and machine simpler and more foolproof while speeding up the exchange to a degree which a decade ago would have been impossible.

An example of this trend is provided by one of the latest products from the Sharp calculator empire. The aim was to provide an ultra-slim design—not even 5 mm. high—and to meet this aim, clearly it was not possible to use conventional keys. There would have been no room to allow for key travel or the connecting circuits. So the designers went for inductive keying. However, when putting an instruction into the machine which does not immediately affect the display, it would not be possible to determine whether or not the instruction had been accepted without some further indication, and this is provided in the form of a tiny electronic chime.

Accuracy and far greater speed of response than was previously possible are also characteristics of the voice recognition equipment developed by EMI with an American partner (Threshold) and used by Arbat as the basis of a unit which could be most useful to currency dealers and brokers when working under pressure and needing to call up information while they are negotiating over the telephone.

Arbat is the computing technology arm of the Arbutnot Latham merchant banking organisation and has made a name for itself in the U.S. and in Britain with its currency dealing and banking systems which operate immediately—in real time—and rely very heavily on displays to keep dealers and accountants in touch with what is going on, or to provide a dialogue between users and the programmes available on

either by an electron beam or a laser beam writing microscopic characters on the film at speeds of up to 90,000 characters a minute.

Against the saving on paper, postage and storage of vast archives must be set the cost of readers and reader/printers needed to consult the micro-filmed information. However, more and more reader units are appearing in what might appear unlikely places—car accessory boutiques for instance—while at least one of the major banks is quickly going over to micro-film for customer account statements and expects to be able to provide a far more complete service on a 24-hour turn-around than in "the old days of banking" many people still sigh for.

Soaring costs of people, paper and city premises are at last accelerating the expansion of this technology which has been available almost a decade.

If use of microfilm information continues to spread at current pace there will have been an office in any major city without a reader of one type or another—many will have their own in-house computer to micro-film and standard microfilm units.

This last will, of course, in the larger organisation particularly those who need keep large amounts of information, such as plans, in libraries or immediate access. Recognising this need, a U.K. company—Imtek—was the first in the world to develop a copier to produce fullscale plans in microfiche at high speed and then removed any lingering objection to micro libraries there will have been on the part of engineers.

Again in the larger organisation, it is possible that the expansion of this technology may very soon


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OFFICE EQUIPMENT XIII



The Olivetti TCS00, which is used for depot invoicing and stock control at Drakes Sweets Marketing, Cambridge.

Choosing a computer

IT IS important, when buying a computer system for the first time, to realise that probably more than half of what is being purchased is invisible.

Moreover the boxes of electronics and ancillary equipment like printers, magnetic tape or disc memory stores and visual display units (television screens) may be a good deal less important in the long run than the intangible system which dictates how they will all operate.

It is true that the hardware, as the electronics is called, must have the capacity to cope with the demands which will be made upon it. Several companies have come badly unstuck because they have bought equipment which turned out to be too slow for their actual needs. As a result, a backlog of orders or stock control data has built up. In some cases log jams in the hardware have cost companies a lot of money, because they have found it was no longer possible to revert to the old manual system, to sort out the mess.

However, the steady improvement in the capacity of peripheral equipment, combined with the falling cost and greater flexibility of central processors, are making errors of this kind less likely for a buyer who exercises reasonable caution.

Match

The real difficulty is in developing a system which will accurately match the needs of the organisation. To some extent systems are linked with the selection of hardware, because the programs (or software), offered by different manufacturers dictate to some extent the capabilities of the machines.

The company which is intending to buy a computer for the first time, would, however, do better to start from the opposite end of the problem by considering the system that already exists in the office.

The introduction of computers can rarely be accomplished successfully without a radical review of operating methods. One of the reasons for this is that even where a computer system follows procedures

which were previously accomplished manually, it will do so in a highly formalised way.

Any imperfections in the system which could be accommodated by more flexible routines, may throw up cumulative difficulties if they are written into a computer program.

More fundamentally, the object of buying a computer must be to improve efficiency. This object will be negated if the computer is used to automate a thoroughly inefficient method of working.

The first-time buyer, and indeed any other buyer, needs to take a fundamental, even a philosophical, look at his organisation, how it works, how it should work, and what its development is likely to be. Even when buying a relatively small, packaged system, this kind of review will not come amiss. Indeed, most companies should be making a regular review of their operating procedures whether or not they are buying computers.

One common error is to believe that the analysis of the existing system can be handed over lock, stock and barrel to an outside consultant or systems analyst. An analyst may be able to help, but some of the issues and choices involved are likely to be fundamental to the management of the business.

After analysing the system, the next stage is to work out the requirements for the computer. For this job consultants may be brought in; but buyers should be aware that some consultants have informal or historical links with particular manufacturers.

An alternative is to go straight to one of the big companies like International Business Machines or International Computers. But clearly there is a danger that the big company will try to mould the small user's requirements to the machines and programmes available rather than the other way round.

One of the emerging features at the lower end of the market is the substantial difference in price between systems which

appear to be basically similar. In assessing the value, however, users need to consider very carefully the amount of after-sales support which will be available. This is not merely a question of how quickly a serviceman can arrive to replace a circuit board when the machine goes down.

Support with the software or programming may be much more crucial, especially in a complicated system where problems can appear some time after it has been set up and appears to be working perfectly. Early attention to this sort of detail and appreciation of the dangers inherent in any computer system may mean the difference between success and disaster. One of the problems which needs to be understood is that systems with the greatest advantages often carry the greatest risks and are the most difficult to change.

Ledgers

For example a company may opt to scrap all its paper records of ledgers, financial information, stock and even correspondence by putting it into electronic language to be stored on tape or magnetic discs. The huge capacity and rapid, flexible access to data may bring great advantages. However, destruction of an important disc could in some cases bring the operation of a company to a halt. Almost all systems, therefore, must incorporate duplicate or "security" storage, so that master copies of important files can be kept in a strong room. However, this is one of the requirements which must be appreciated and planned from the start. For example, the machinery must have the capacity and speed to make security copies of files without interfering with the time allotted for the normal routines.

The other point is that once a system is operating, change to a rival system could be difficult and expensive. Since the two systems may not be compatible, even copying of the files could involve some quite

complicated programming. This merely underlines the need to get the choice of manufacturer right at the outset, bearing in mind the possibilities for future expansion and other variables.

For those embarking on the road to computerisation, there is a dearth of literature to help, partly because much of what is written about computers is

rendered unreadable by the maniacal use of jargon. One exception is "The First Computer Handbook" by M. J. L. Turner (from 10s, Chandos Street, London W.10., which gives a clear explanation of the main types of equipment now on the market as well as a step by step approach to purchasing.

M.W.

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Market

CONTINUED FROM PREVIOUS PAGE

linked directly to facsimile transmission following an important, but not sufficiently well-known development by Olivetti, based on work for the military, which enables novel equipment to capture and reproduce A4 size copies in fractions of a second. This development has left Olivetti's rivals even in the U.S. far behind it. The key to the extension of such a service is, of course, what transmission charges are likely to be.

With such a wealth of equipment likely to be a commonplace many City offices over the next decade or so it is only natural to pose the question of doing. Who will prepare the filled staff able to handle expensive equipment without for problems?

While several computer users have approached the question by designing keyboards that are totally appropriate to a limited range of tasks and virtually do not allow operators to make mistakes, they do not like the implication behind this method in that it could destroy initiative completely and with it any real rest in the job.

A great deal of successful computer education work has been done by associates of the Brandon group using video audio taped instruction the name given to the project

used with linked manuals. There is a need for similar training packages for the office, particularly in view of the proliferation of terminals of all kinds in the wake of the current communications explosion.

And it is worthwhile recording that the handicapped will not be excluded from this progress, thanks to ideas which originated at National Physical Laboratory. There, micro-computer based video/audio equipment has been developed by a team under Dick Penn who believes it can be tailored to meet practically any handicap.

For paraplegics, a puff-suck mouthpiece can be used to give coded instructions to the computer-controller to select characters and form commands just as an ordinary keyboard would do. For the blind or partially sighted, a talking arithmetic program is available and it is possible to use the power of the equipment to compose music. Ceefax, Oracle and eventually Viewdata facilities will be available and while the work has been in progress for only 18 months it could lead to the production of a series of interfaces permitting the handicapped to use most advanced equipment. MAVIS - for microprocessor-based audio-visual system - is the name given to the project

which could do wonders to give a fuller life and a greater degree of independence to the less fortunate. Intelligence is not the prerogative of the hale and hearty and it is essential, particularly for Britain, to make every use of available brain-power.

Apart from training new staff, there is the perennial problem of putting the message across to existing cadres, concerning new sales plans, new products, company progress and so on. In a fast-moving and highly competitive business effective internal communication in such areas is vital and not effectively met by sketchy flip-chart or overhead projector presentations. Many large companies go to the considerable expense of making "The World of X" colour films, frequently with unhappy results.

For any company which produces to make audio-visual products a fact of life, it is worth taking advice from experts beforehand and examining work they have carried out for others. There is such a vast range of projectors, media, training methods and possible permutations that novices are unlikely to come up with the right answers.

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Development in furniture

FEW INDUSTRIES provide such a barometer of business optimism as the office furniture manufacturers. And since business optimism is essential for revival, the quickening level of demand for new office equipment in the past nine months must be seen as encouraging for the U.K. economy.

Two years ago office furniture manufacturers were in a poor way. This had a certain lateral advantage in that it forced them to look abroad for sales and, in particular, to the Middle East. The oil rich Arab world has preferred British office furniture to its German, Swedish and American competitors and has, in fact, underpinned the industry for the past couple of years. Now domestic demand has improved.

Not all domestic demand however: the small businessman furnishing his own, and perhaps a secretary's office, does not feel prosperous enough at the moment to acquire new desks, chairs, cabinets, etc. The growth stems from the bigger companies and from local authorities which are often moving into new office accommodation, perhaps out of London. So the suppliers are getting orders in the £5,000-£10,000 range rather than £1,000-£2,000 which was more common three to four years ago.

Just as encouraging as the appearance of more, and more substantial inquiries is the interest shown by consumers in new types of office furniture — the system technique. Behind it all is a concern with using very expensive space more effectively. One approach pioneered in the U.S. and linked to com-

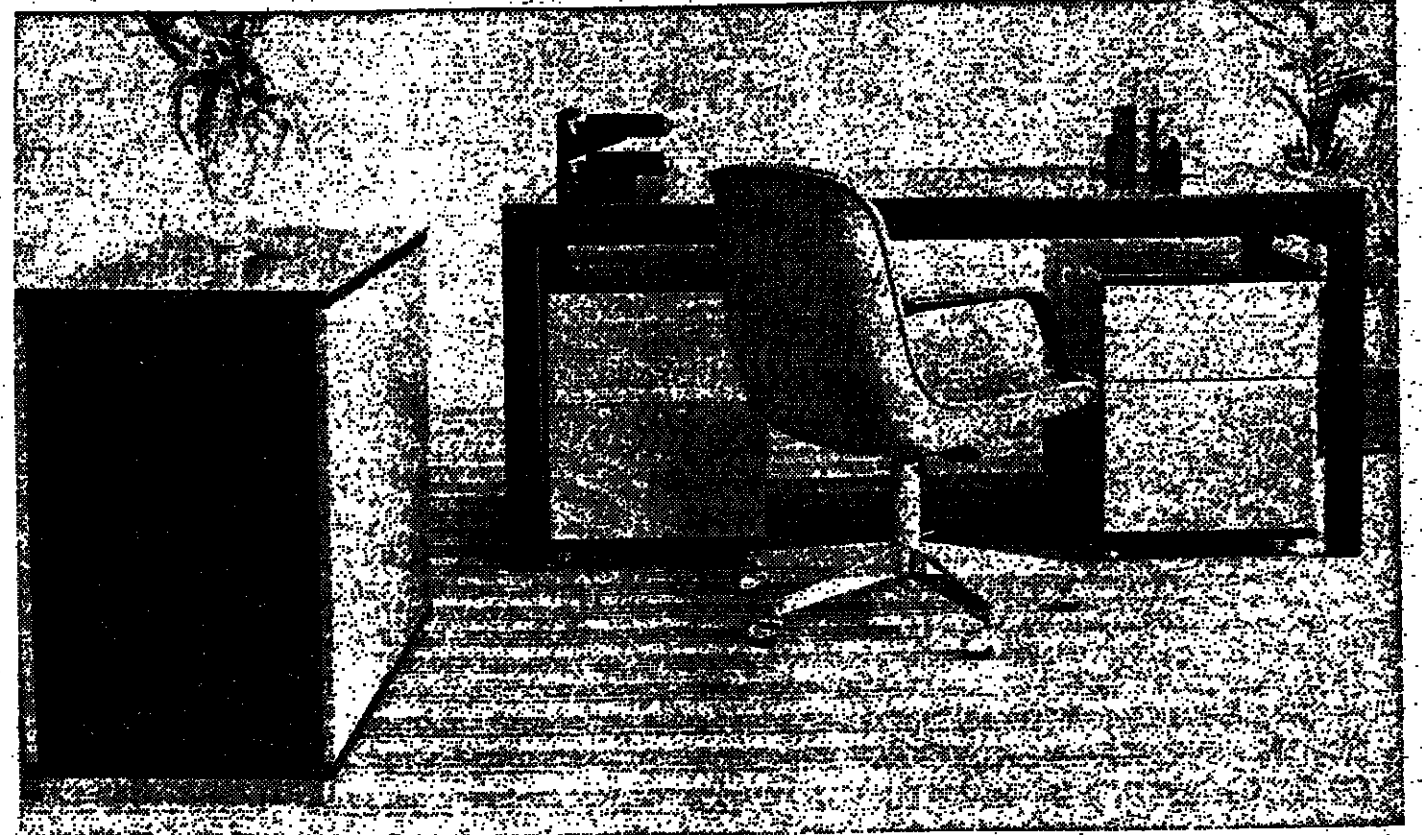
panies like Herman Miller and Carson, is basically a compromise between traditional walled offices and open plan. It consists of movable walls — because most people like to work within walls — which can be grouped to form a honeycomb effect. A development is to attach working areas to the walls, with an obvious saving in space.

An alternative system, more associated with Germany, is to group desks together according to the work patterns in the office. This gets away from walls and is more like open plan. Obviously the introduction of either of these systems requires the advice of a consultant — they are a "bespoke" rather than an "off-the-peg" solution to office problems — but Carson, which is active in this area, reckons that a third of the market now comes from systems furniture rather than the conventional desk and chair replacements. More systems are on the way: Ryman will be introducing a new concept in a few weeks time which is the result of combing the world for a fresh approach.

Swing

One other development which has assisted the swing to systems is the willingness of customers to go for quality in office furniture. In comparison with office rents and rates, and the cost of labour, furniture is now relatively cheap. So there has been a move towards more expensive fabrics — the better woods and metal instead of plastics. Offices are becoming more attractive places to work.

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familiar company figure as well as in local and national Government offices, and his recommendation on how the staff can be encouraged to work productively by, not only the more efficient use of space but also through more comfortable furnishings, is reflected in the ordering of sophisticated and luxurious items by employers.

Quality furniture is not much more expensive and it can, in fact, save money. It not only promises a longer life — and companies expect their furniture to survive better these days — but it can have more immediate advantages, especially the new generation of desks which tend to have their accessories built in. Instead of a desk lumbered with telephones, calculators, clocks, etc., these items can be part of the furniture. The legs of desks can be used to carry the wiring, and all the electrical inputs gathered together in a box attached to the bottom of the desk. Increasingly, desks will carry their own lighting and even air-conditioning.

This will enable companies to move into more basic and cheaper, new office blocks. Offices which come complete with ceiling lighting, floor wiring, and air-conditioning often cost up to a third more than the simpler, speculative premises. So sophisticated desks

can be an answer to costly office rentals and rates, and sophisticated desks are likely to feature at the International Business Show this month.

Desks with all the trimmings and furniture built into systems to reflect the actual work patterns in offices are obviously far removed from the conventional desk and chair replacement market. The office furniture industry is dividing into two, with on the one hand consultants selling and offering almost a work study of the customer's office; and on the other the conventional retail or wholesale trade, which is currently the sluggish end of the business. But overall there is a feeling of movement.

Ideas

Although most offices are a hotch-potch of designs, materials, and equipment, new ideas are making headway. Filing cabinets, for example, are now seen as space-consuming and often impractical. They are ill-fitted to store computer print outs, cassettes, and the other products of the technological revolution, and the modern idea is to go for a shelving storage system rather than upright cabinets.

Chairs too, have been the subject of much research. The

man-hours lost through back-aches (17.4m. days in 1975) furniture suppliers will increasingly act as advisers on chairs, would pay for the most modern office equipment many times over, and the advice of ergonomic consultants about this is now listened to in the more progressive companies.

An office chair can cost anything from under £20 to almost £100 for an imported model. But imports are limited in this area, and the main U.K. manufacturers and suppliers, Tansad, Evertaut, Pel, Roneo, Vickers, Carson and Ryman, are as well aware of ergonomics as the overseas competition. Comfort is still more important than design, or gimmicks, such as the so-called "gas lift" a German invention, which at the press of a button adjusts the height of the chair while the occupant remains seated. This costs an extra £10 a chair and British suppliers are sufficiently impressed to offer their own models. Another German innovation, chairs with five legs at the base, which is supposed to be an important safety factor, are also now available in this country.

The future in office furniture is likely to be a compromise. Small, individual offices, the cellular approach, will become rare as they are space consuming and interfere with communications; open plan is noisy

still growing in popularity. Screens are not only useful for the display of charts and other paperwork, but shelves can be attached, and storage units added, so that the screen becomes the work station rather than the desk. Four drawer filing cabinets are being replaced by versatile storage units, either open or with doors, blinds and shutters, which can stock a wider range of materials.

The office furniture industry is certain to become more dependent on exports, and on office mobility, which brings in the big orders. For the customer the range of systems and models is likely to expand so that the traditional mixture of styles, such a feature of British offices, seems destined to remain the norm.

Antony Thorncroft

Vending sales improve

AS THE COST of providing amenities and services in offices continues to rise sharply, there is increasing interest in automatic devices such as food and drink dispensers which can eliminate the need for highly paid secretaries to waste their time on activities such as tea making.

The main problem with machines of this type has been the quality of the product, but efforts on the part of manufacturers and the equally important operators of this equipment have gone a long way to show that acceptable drinks, both hot and cold, and a variety of food can be provided in this way.

Figures from the Automatic Vending Association of Britain have shown that despite the lack of demand created by depressed commercial and industrial activity, both sales of vending machines and food and drinks from them, are rising at a steady level.

Sales of hot drink machines of the larger variety, mainly for industrial premises, have remained steady at around 7,000 machines a year, but the smaller dispenser type machines usually used in offices are selling in rising numbers at the rate of around 5,000 a year at present. This is widely accepted as a growing market and manufacturers believe that offices are nowhere near saturation point.

In terms of drinks served a reasonable guide to the vending machine market as a whole) things are definitely looking up. The number of drinks bought through machines in 1975 was 2.9bn., of which 2.7bn. were hot and 171m. cold, is well up on the figure of 2.5bn. five years ago, but also well down on the unusually high 3.29bn. in the peak year of 1973. This was attributed largely to stockpiling at a time of rising prices.

However, in a more stable economic atmosphere last year it is estimated that around 3.1bn. drinks were sold and de-

mand this year will certainly be in excess of that. In the first six months the figure has reached 1.6bn. and will approach the 1973 peak.

It is clear that as the quality of machines and the demise of tea clubs has progressed, office demand for this type of equipment has increased substantially. In cost terms it is also clearly advantageous to use services of this kind.

Secretarial salaries have risen to the point where it is not sensible to waste their time in tea making activities, and conversely the highly trained secretary is often unwilling to co-operate in doing so.

Survey

At the same time there is no reason to suggest that the quality of hot drinks should suffer as a result of introducing machines. A recent survey carried out by the Automatic Vending Association of Britain has shown that if machines are properly operated and maintained, there is little difference.

Offices have also become an increasingly attractive market for food dispensing machines and about 1,800 were sold during 1976. The key to this market is apparently the introduction of more enticing display systems which eliminate the inherent doubt about the quality of food sold in this way.

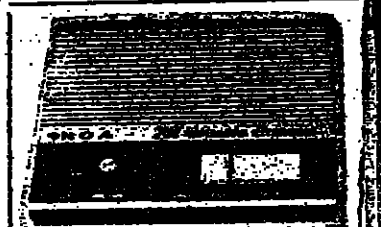
In terms of operation, the increase in demand for food has not caused any great difficulties because existing contracts for the servicing of drink machines can usually be extended to these machines as well. Major food groups have also been active in reaching supply agreements.

Although the nature of the industry is inherently stable, some new developments do have an impact from time to time. The newest of these is the so-

called "in cup system," the concept of pre-measuring drink ingredients into each cup before the product leaves the factory, so that the machine itself merely adds the water, hot or cold.

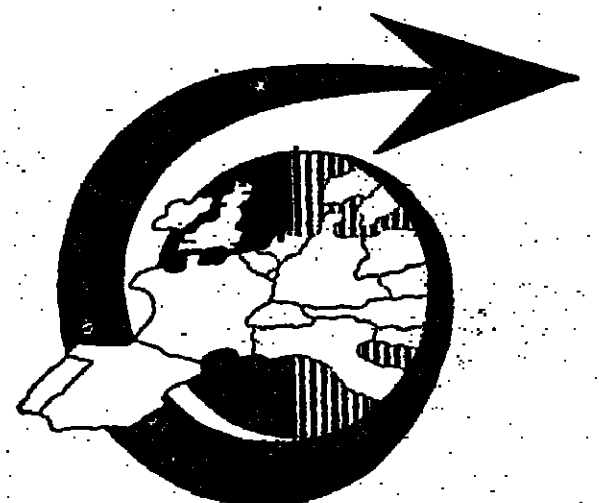
This idea originated in the United States and is now being developed by Four Square

CONTINUED ON
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The environmental factor

SURROUNDING objects, region of environment. Relative to a busy office, it takes imagination to see how a bank environment could drive employees and customers away. That the former's loyalty has been stiffened by years of pay restraint and the latter do not always seem to rely on a monopoly.

Customers as well as employees have, in many instances, been concerned with safety and/or safety standards. There are areas of office which apply to both—air-conditioning, good lighting, draughts and so on. The observer of the office has said that environmental considerations are an area where a lot of employers do "the least that they can get away with." But that word "least" is a matter of interpretation. Applied to any business which watches its property, it could be the minimum required to get the most out of a given quality and utility of staff—and service a growing and growing body of customers.

With its base in California, Bank of America rejoices in its standing as the biggest commercial bank in the world. Its lack of embarrassment, compared with some of its competitors, as far as the indebted-

ness of New York City is concerned. In London, it reckons to have staff in both quality and quantity, growth, and a springboard for expansion in Europe, Africa and the Middle East.

But growth brings its own problems, and these came to a head about a couple of years ago. At that time, its London operations were spread around. Its divisional headquarters were at Park Lane; the main London branch was at Walbrook in the City, and the International Financial Centre (foreign exchange) at Bucklersbury House, also in the City; there were also offshoots at Mayfair and in Bruton Street.

Problem

Walbrook was the main problem, with a staff of about 450. "Some trying to find the edge of a desk to sit at" was one comment recently—and while attempts had been made to move people around, it seems clear now that the imminent expiry of Bank of America's Walbrook lease was viewed as a blessing.

By 1975, the management had been thinking about a move, on and off, for something like 10 years. That September the decision was taken to move into its new headquarters, Gateway House, in Cannon Street in the City of London. And Bank of America got its chance to improve on its

own slice of the environment, for staff and customers alike.

At this stage, the specialists say, too many companies dump the problem into the lap of a senior company executive who has never seen it like before—and may never again, given that the company is risking his health, his sanity or both. Others would rely on management consultants, or even more specialised office planning and/or design consultants to pull together the skills of experts in interior design, furniture, wiring and colour schemes.

The Bank of America started with some advantages. The building had been bought by the Imperial Group Pensions Fund in 1972 and the cost had risen from £27.7m. to over £32m. due to subsequent work; this had included major renovation and structural alterations which allowed for the provision of a substantial increase in the net floor space and for the installation of a sophisticated air conditioning system. The building was double-glazed throughout, and the office areas were fully carpeted.

A long list of the Bank's advisers at the time the new lease was signed included Sir Frederick Snow and Partners as structural engineers, Higgs and Hill as contractors to the building, design consultants Michael Inchbold and Finroy Robinson and Partners—the latter instructed by the Bank of America to supervise the further alterations and fitting out that the Bank would require. On top of that it had its own in-house team; here again, the Bank America group had a special advantage in its own Continental Service Company, based like the parent in California and set up with just this sort of responsibility in mind.

A project manager was flown over from CDC in October, 1975; the move was completed in July, 1976. The project

manager stayed on, based in Cannon Street, to supervise this aspect of the Bank's expansion in Europe, Africa and the Middle East; and the staff numbers have risen from 750 at the move's inception, through 800 at its completion, to around 850 at the moment.

Safety standards, and particularly security measures to protect staff, customers and money must have loomed large while the job was being done. In 1975, at least £2m. was the take from a robbery at the Bank's Mayfair branch, and by mid-1976, when the case went to trial, this was described as "one of the world's largest bank robberies, if not the largest in history."

Facilities

Like other banks, on this aspect the Bank of America confines itself to saying that it "has security" at Cannon Street. One aspect it does reveal is that car parking facilities went to make room for the vaults, but this is one environmental disadvantage that most City workers have to put up with. Still on the safety angle, the bank has a nurse in the building to take care of cuts, bruises and worse—not just a matter of the odd finger stuck in a typewriter, since the bank has responsibility for the maintenance of the building, plant in the sub-basement and the crew that this requires.

Where space is concerned, those who remember reckon that the ex-Walbrook staff have 14.2 times the working area they had before. Some of them, incidentally, can look out over a raised garden which drew the odd wry comment at the official opening last year, the day before the Bank passed it over to the City Corporation. But last year, it was a matter of keeping plants alive; this year,

the garden (and the Bank) has received the Miller Trophy from the Worshipful Company of Gardeners.

Looking after the inner person, there is a staff restaurant and sandwich bar nearby which the management reckons, at a pinch, could take two sittings at 400 people a time. The bank came down against the somewhat controversial idea of rest areas in the main building, reckoning that it was best for the majority to get away from their "work stations" for a break during the day. Meals are subsidised and the restaurant area hosts some recreational activities. The Bank America Club takes in darts and table

tennis there and it also arranges football, social functions, dances and discos.

Back in the office, executives are not disposed to claim excellence in internal environmental planning for decisions which might just as well have been based on aesthetic considerations. The combination of natural and artificial lighting with a colour scheme of tans, browns, pastel greens and wood finishes does seem to be easy on the eye; but so is the plant that decorates every office, and the plants were not put there to cut out glare. One practical wrinkle, however, is that certain wall colours denote the same function regardless of floor, so that

new arrivals may be less confused when finding their way around.

With office furniture, the Bank is gradually aiming for a standardised pattern with a work station—desk, chair, and like tape cutting machines, are locked away out of the main stream. So are the bulk of the filing cabinets, which probably reduces the clutter quite considerably.

With this, the variation between glass-fronted offices, open space centrally for secretaries and complete open plan, the overall impression is one of light, space and relative comfort.

William Cochrane

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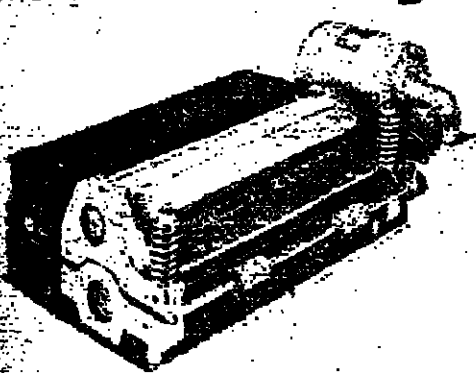
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Vending

CONTINUED FROM PREVIOUS PAGE

Catering and Vending, a division of Mars, and by General Foods.

Considerable technology is involved in the system, both in the area of the cup filling process and the development of advanced new designs in vending machines. The system has gained quickly in popularity due to greater hygiene and simpler operating and maintenance procedures than with more traditional vending machines.

Since the advent in the United Kingdom of the in-cup system in the early 1970s, a quarter of all new machines sold now incorporate the system and by 1980 this figure is forecast to rise to 50 per cent. Now that the U.K. has achieved the foremost position in technological expertise for the new system, export potential is also substantial and Klix, the system marketed by Four Square, is penetrating new markets in the Far East and Europe.

The advantage of the system is that machines have fewer moving parts and have a high degree of versatility. For example, by means of a switch either hot or cold drinks can be served in a wide range.

Loading the machine is merely a question of putting cup stacks into their labelled slots in the carousel located inside the machine, but perhaps more important it allows the client to operate the system himself.

Another development in the vending of beverages, which accounts for around 66 per cent. of the market and is still the most profitable part of the business, is the provision of 50 called "fresh brew products" or to be more precise traditionally made coffee or tea.

These have become increasingly popular in the U.S. and are now having greater impact in Britain, although the widespread use of instant coffee in British homes has made it something of a traditional beverage. The real advance is in the making of tea, due to the fact that soluble essence has not yet approximated the real thing.

To make real tea, the machine has to extract the flavour from the leaves in a limited period of time, perhaps about 15 seconds, so a specially fine tea is required and accurate temperature control on the water. The advances made in electronically controlled systems have been timely in producing the precision required.

In many offices the use of automatic dispensing machines is clearly designed to supplement other catering services such as canteens which may be available, since attempts to provide any satisfactory hot meal

dispensers remain at an early stage, although the development of the micro-wave oven has been a major step forward.

Although the major saving associated with vending machines is the reduction in staff costs, any attempt to undertake large scale automation of catering services is not to be taken lightly. Although bigger systems such as self service canteens are available, these are normally only satisfactory for places where normal canteens are difficult to operate or for night workers, for example.

Another innovation is the provision of hot meals heated in cans and dispensed with easily removable lids, but again this has obvious disadvantages for most offices. It is clear therefore that although vending machines can and do offer an excellent service in a limited area, it will probably be some time before they can hope to compete with a well-run canteen.

Lorne Barling

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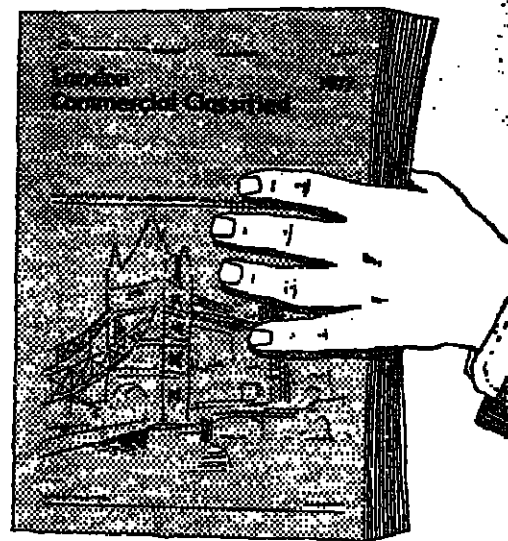
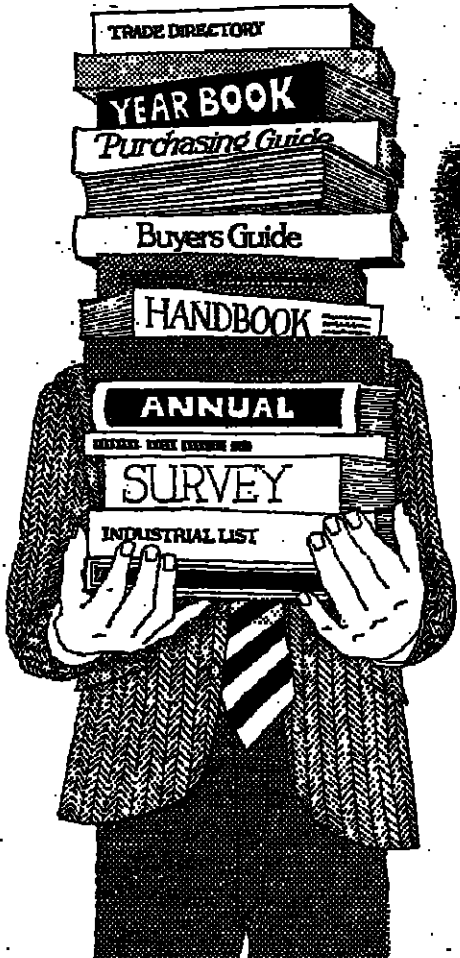
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The importance of good design

PHOTOGRAPHS OF offices which have won design awards are remarkable in one particular. Either the machines, which undoubtedly play an important part in the life of that office, have been removed before the shot was taken, or they are carefully arranged so that their power and telephone cables are hidden by the surrounding furniture, or the cable has been unplugged and tucked away out of sight under the machine itself. The same office would present a different picture during its normal working day, before it had been given the photographer's treatment. Cables would trail across desks, half of them obliterated by papers and files, they would entwine with each other beneath the typists' feet, stretch lethally from table to far distant plug and generally present a scene of much muddle and no little danger. In some corners of the office there would be people crouched over machines which were set too low, while in others there would be people craning to reach the back of machines which were too high.

The fact is that, although small machines, most of them electrically operated, have proliferated to an enormous extent in recent years, little real provision has been made for them by designers and manufacturers. Large machines are in a class of their own. They are normally free-standing, often very well designed and usually accommodated in special computer rooms, post rooms, print rooms or the like. The trouble begins when you get to the machines used in most offices: typewriters, adding machines, dictating machines, intercom systems, photocopyers, duplicators and even mini-computers, all electrically operated, many of them.

A notable exception is the following lead set by such firms as Olivetti and IBM, extremely handsome in appearance, all intended to be placed on a table top. And there they sit amid that spaghetti-like tangle of cables long-term guests who are very welcome but for whom there is as yet no real bed. Architects and office space planners, admittedly, are doing their best in the organisation of new or rehabilitated offices to ameliorate this messy situation. In deep plan buildings (those in which components can be linked to most commonly used for open plan offices) a power and lighting grid is normally arranged in the floor with flush fitting outlets, and if these are in

Provision

Assuming that ample and flexible provision has been made for either floor, ceiling or wall outlets, the real inadequacies emerge when the furniture is moved in. For despite all the new furniture ranges which were rushed on to the market during the years of the office building boom, most of them hedging their bets and announcing themselves as suitable for both cellular and open plan arrangements, very few even of the best appeared to recognise the arrival of the machine. And those which did were invariably foreign. I think that this deficiency has recently been recognised, but too late. Virtually no new ranges are being launched in the current economic climate, and office planners have to compromise with furniture which, though it may be of excellent quality and handsome appearance, really makes little provision for the encroaching army of office machinery.

A notable exception is the system of furniture called MEB which is manufactured by Voko in Germany but imported to this country. It is a steel system of sturdy construction which was recently used in very large quantities by architects Robert Matthew Johnson-Marshall in civic offices they have designed for Reading Borough Council, where it has apparently been a great success.

Voko has overlooked nothing. The typing tables, work tables and various wedge-shaped components (which can be linked to form a variety of curving as plan offices) a power and lighting grid is normally arranged in the floor with flush fitting outlets, and if these are in

work surface thicknesses to enable typewriters and other machines to be placed at the appropriate height, and there is a 30mm leg adjustment making all the furniture extremely flexible in use—for the people who must work with it as well as the machines. And the designers have lost any intransigent cables and telephone wires in the most ingenious fashion, threading them away to terminal boxes and sockets within the framework of the furniture and thence on via a single cable to floor plugs which will—if the office is carefully planned—be in close proximity. Any cables which need to cross a desk or table top follow a cable channel, which is concealed by a cover incorporating pencil and ash trays. An added refinement to this well thought-out system is a pivoted telephone stand which "floats" the instrument above the work surface, thus clearing more space for work, with the wire, of course, threading neatly away into the framework, and a slim-stemmed desk lamp which works in the same way. Voko has truly registered the advent of the office machine age.

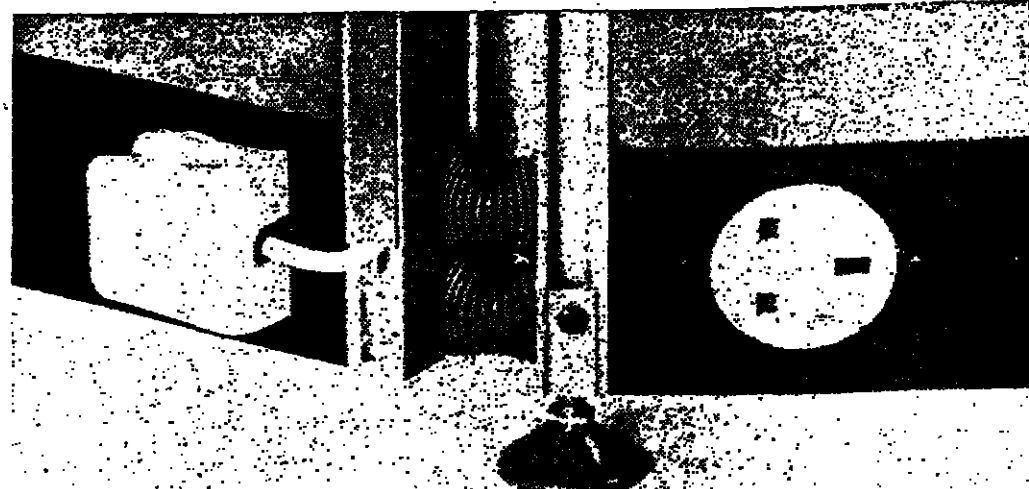
Happily one British firm has now had the wit to emulate it, if a little late. Carson, whose office furniture has always had a reputation for good design and quality at reasonable prices, is launching a new range, the 1100, and will have prototypes on show at the I.B.S. This will incorporate all the cable-concealing features pioneered by Voko, but will have several advantages over its German competitor. For instance, the range is to be in wood, which many office planners and users prefer to steel, and in addition the company introduced integral trunking into the screens which form part of one of its existing ranges the Link 900. Voko does not sell ordinary acoustic and visual screens. Carson does, and now these—which will of course be available with the new 1100 range—have been most meticulously redesigned to incorporate a double channel mounted at the bottom of each screen. Easily accessible via a special drop-down access flap, this will allow both electrical power and telephone cables to be run along one or a succession of screens, taking power away from the work station to a floor plug. This gives immediate flexibility to those planning an office, even when the underfloor grid is not as lavish in outlets as it might be, for cables can be taken some

distance in the most discreet and tidy manner, via the screening system.

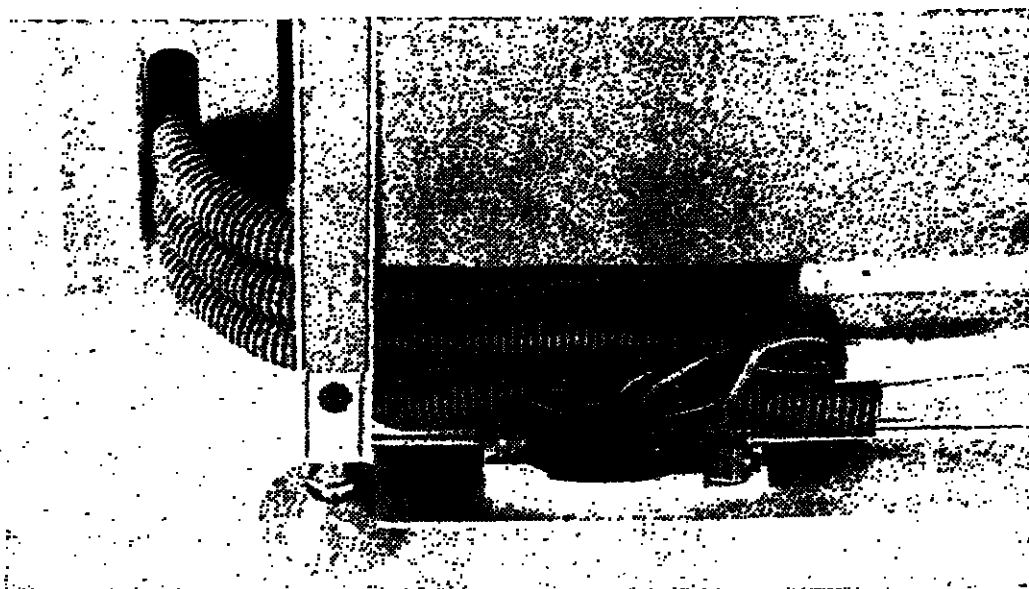
One other English manufacturer deserves a mention. Hille put its Office System on to the market nearly ten years ago, long before either of the other two products was thought of. It is a splendid range of free-standing desks, carrels, screens—virtually anything which could be required in any type of office—and, although it was designed before machines assumed the importance they now enjoy, the carrels do incorporate ducts to conceal electrical and telephone cables, and even the work tables and desk have a grommet and plug fitting to hold cables in place, which is a great deal more than can be said of other ranges emanating from that period.

The need which Hille recognised so early has at last impinged upon less perceptive manufacturers, who I predict will shortly be heaving themselves on to this particular band wagon. They will have to unless they are to lose business to more alert competitors.

Jose Manser



The Carson Link 900 integral screen trunking. The top photograph shows how cables or wires run inside the channel, while, below, the snap-on cover is removed, giving easy access for maintenance.



If a lessor, however, is to lease for a five-year term, it means the amount of depreciation is accordingly. Rigorously speaking it is therefore impossible to get out of a contract once signed without comparatively high expense, since the lessor's finance will be upset. It is extremely important to check that the machinery which is being leased is what the lessee wants and not what the lessor wants him to have. In the year or two, leading companies have worked out more flexible schemes to allow changing equipment to meet changing needs, such as equipment which can make an obsolete machine obsolete.

To the well-known smooth-working company there will probably be no problem in getting a lease in routine way. For accounting purposes, leasing is a straight expense, the "costs" going out as "rentals" each month. To some extent, many cases a significant expense of a company are affected by its leased equipment, and the normal line credit to the bank are affected. Leasing is in a sense a useful line of credit even the best-run companies.

Newcomer

To the newcomer in the business, the way may be so easy. Leasing companies like to see a track record of at least two years before signing contract signature. They want to be sure that a company is not "over-leasing"—that its leasing commitments are not bleeding it dry. On the dangers of leasing is, while the front-end comments are almost non-existent, an accumulation of leases he a very expensive business. There is sometimes a tendency to regard leasing as a final avenue of last resort. Lessor's pre-occupation is make sure that he is not as such, since he absorbs the much as any banker.

The principles of office equipment leasing apply to any of leased equipment, right a complete oil refinery, possibly with increasingly complex variations and prices with more expensive equipment, and for equipment with long second-hand value (the less risk is increased if he is sure he can easily sell equipment to a third party the first lease breaks down).

The advent of increasingly sophisticated office equipment, such as desk-top computers, sophisticated electronic accounting machines, has been a new twist to the leasing comparison. The more expensive equipment, the better deal they offer since their overheads are easier to absorb. And they know the more expensive equipment, the more likely user is to become a lessee.

Robert Hawley
Editor, Leasing

Leasing takes hold

PROBABLY BETWEEN a fifth and a quarter of all the office equipment sold in the U.K. is now sold through lease finance schemes. The most popular leased item is the copier, of which 80 per cent are lease financed, but the facility extends from typewriters and franking machines through addressing machines to in-house printing equipment and mini-computers. Leasing is consequently recognised as one of the most important aids to sales presently available.

Equipment manufacturers pursue two chief methods of securing lines of lease finance: they either contract with established leasing companies to provide the facility—companies such as Bowmakers, Anglo Leasing, Hamilton Leasing, Schroder Leasing, IBOS equated to "borrowing" money and the like—or they set up

their own leasing subsidiaries funded by their own profits and the conventional money markets. These companies are frequently managed by established leasing companies who have the know-how and the extensive computer record systems essential to the job—leasing so-called "small ticket" items such as office equipment involves high overhead costs.

Eligible

Office equipment is eligible for first-year investment allowances made by the Government to encourage investment in new equipment. This means that the equipment earns the deferral of tax for the period of one year, based on first-year depreciation. This can be 100 per cent, financing, since no deposit has to be made by customer (or lessee) although

he will generally have to pay a rental or more in advance, depending on the equipment and leasing company involved.

The important elements in signing a lease contract are these: The equipment always remains the property of the leasing company, and at the expiry of the contract term—generally three to five years—the equipment remains the property of the leasing company. The lessee may take out a second lease if he wishes when the rentals are reduced to a fraction of the first-term amounts.

Nullified

If the leasing company sells the equipment it must go to a third, unconnected party, or the first-year allowances would be nullified and the lessor would be out of pocket.

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BA's and the lure of the ivory towers

BY MICHAEL DIXON, Education Correspondent

Little is known about the effects of the U.K.'s £700-a-year education system on other sections of the country's society. What is known, however, is that the system is a powerful device for expanding itself.

In this process, a decisive role is played by the universities and polytechnics—the higher education sector. Since the secondary schools below mainly measure their success by the number of pupils they send on to degree courses, the student capacity of universities and polytechnics exerts a strong influence on the directions of study pursued by schoolchildren.

Here there comes into play another—probably the central—function of the education system. It is that of selecting and training its own staff. The number of student places which universities and polytechnics provide in different subject areas is a major determinant of the shape in which the system expands. The larger a particular area grows, the greater its intake of school leavers, and the number of its postgraduate students who go back to the schools as teachers. The greater, too, becomes the number of its new graduates who go on to higher degrees, both at master's and doctor's levels, in the same academic discipline.

The effect at higher-degree level of the self-expanding process is shown by the accompanying table. It compares the output of British universities at its level in 1975 (the latest for which detailed figures are available) with that of 1969 (the earliest for which I have comparable evidence).

In 1969 these universities produced a total, excluding medicine and associated subjects, of 588 postgraduates. At that

time these institutions were still expanding in the aftermath of the Robbins Report in the early part of that decade. The result in 1975 was a 50.5 per cent. increase in higher-degree production, to 14,832. But by that year a major change had occurred.

The expansion of the universities, affected by the economic recession, had stopped at least in terms of intake of new lecturers. And the curbing of the recruitment of dons, which if anything seems to have grown more severe over the past two years, was very bad news for higher-degree students.

While postgraduate qualifications have currency outside education—though far more in the cases of science, engineering, and some minority social studies such as management, than in others—the aim of the majority who pursue them is to join the staff of a university or college, or to enter a profession. Having been in formal education, and subject to the values of the academic pecking order, for some 16 years by the time they gain their bachelor's degree, the youngsters who are offered the chance to continue academic study are only too inclined to take it without reckoning what the extra time invested might or might not be worth in non-educational work.

Many must have bitterly wished they had done so, as a result of the sudden disappearance of the former large numbers of new academic posts in universities and polytechnics. The depression was doubly reinforced for those who failed to achieve their academic ambition, because not only were there more competitors for other kinds of career, but the recession which halted recruitment of dons had also reduced the

WHAT HAPPENED TO DOCTOR'S AND MASTER'S DEGREE GRADUATES—1969-1975 (PERCENTAGES)

	Number	Overseas students	Whereabouts unknown	Still seeking permanent job at Dec. 31	Already in employment	Entered Employment in United Kingdom in				
						Schools	Polytechnics and colleges	Universities	Public services	Others including publishing
Social Studies	1975	4,828	27	14	3	21	24	53	47	11.2
	1969	2,131	22	13	2	20	15	42	8.6	1.1
Arts	1975	2,133	30	16	5	12	62	40	3.8	1.0
	1969	1,404	28	13	3	12	70	41	2.0	1.4
Sciences	1975	4,902	28	11	3	11	29	22	4.8	1.0
	1969	4,117	20	8	1	11	15	3.0	4.6	1.4
Engineering & Technology	1975	2,969	45	13	2	12	84	14	4.2	0.8
	1969	2,186	32	7	1	17	0.3	2.0	4.4	0.7
Total	1975	14,832	31	13	3	15	27	33	49	7.3
	1969	5,815	28	12	3	11	23	27	9.4	6.3
Overseas students	1975	4,951	100	14	2	1	0.3	0.4	1.1	2.3
	1969	9,858	27	9	2	15	2.0	3.2	8.6	4.2
Total	1975	4,445	27	8	1	11	0.9	2.1	12.9	3.9
	1969	2,491	100	7	2	4	0.2	1.0	2.6	4.3

number of opportunities elsewhere.

By 1975 industry and commerce were evidently taking a sharply smaller percentage of the output of postgraduates in all main areas except some social studies, where the proportion was slightly up. But the master's and doctor's graduates of that year were still better off than postgraduates in 1969. For then the number of jobs in the public services was still increasing, and that is so no longer.

According to university careers advisers, the effects on this summer's crop of postgraduates, while of course

severe, vary with institutions, and with subjects. All other things being equal, the person who emerged with a higher degree from Cambridge or Oxford seems to have been better placed than the equivalent from elsewhere. Differentiating between subject areas: people taking master's qualifications in management—who are usually older than postgraduates in other disciplines, often having had working experience before returning to further study—are in general apparently finding little difficulty in finding employment, even at salaries of £7,000 or more. And these in science, and engineer-

ing and technology are reported to be distinctly better off than those from arts and from those social studies which the external world views as of lesser relevance than management.

But with this sole exception, there can be little doubt that the differential value, in terms of extra pay, of a higher degree has on average fallen heavily across the board. People with doctorates even in subjects such as chemistry, and master's degrees in applicable skills like statistics are known to have settled for jobs in industry and commerce at starting salaries only a little above, and on occasion even below, those pre-

vailing for bachelor's graduates very hard before accepting the chance of continuing up the academic ladder.

But while more are undoubtedly doing so, there is a distinct decline of demand against rising supply would predict.

I suspect that it is because employers have become disenchanted with economics as a subject that is useful to business, said one careers adviser, trying to stifle a sarcastic laugh. So there is every reason to come the state of the employment market for future youngsters along for some prospects in their undergraduate advice on outside prospects in their disciplines, commented a class honours or even a first-class bachelor's degree to think many of them don't look for any

guidance beyond their tutor and the tendency there is that the advice will be insufficiently informed, if not downright tendentious.

It was referring here to a spurious, widespread among the staff of university appointments services, that a good many of their academic colleagues irresponsibly encourage good undergraduates to stay on, even when knowing that the return to the student by way of career prospects may be minimal, or negative if the time spent in extra study leaves the postgraduate too old for a career which would have been open at bachelor-degree level.

But another factor in maintaining the staying-on at rates unimpaired by prospects of employment, is the sheer force of the wish among undergraduates to make their career as an academic. Given a choice between potential recruits with a lower and a higher degree, university departments will in general automatically opt for the higher. As a result, with perhaps 250 candidates applying for each university lectureship coming available, if undergraduates are to have any chance of an academic job, they simply must complete a doctorate.

The result is depressing, not only for the majority of the postgraduates whose extra investment of at least three years fails to pay off, but also for the universities themselves. This is because many of the candidates for lectureships now are better qualified, and have also taken more trouble to prepare themselves for teaching, than large numbers of those who were swallowed up by the expanding university departments of the 1960s.

Letters to the Editor

A way of taxing talent

from Mr. A. Scott.

Sir,—Although it would help us did not have tax arrangements which provide tax relief on talent and wealth to such places as the United States, nevertheless, I think that we should make allowance for those people who reverse the normal order of things and attain very high earnings in their youth. Such are sportsmen, divers and others.

I suggest that they should be able to capitalise on part of their earnings over a certain amount, paying income tax only on the remaining part. The capitalised part would go into Government under-linked bonds, payable in full on, say, their 55th or 60th birthday. In view of the indexing, they would not pay interest, but they would provide the means to start a new career in middle life.

In the event of premature death, the money would be paid immediately into the deceased's estate. The occupations would have to be those which can only be followed in youth.

102 Reeves Road, Chelmsford, Essex.

The nuclear club

from Elizabeth Young.

Sir,—Your leading article on the work of the Nuclear Suppliers Group tells us that it stands inviting some of the more recalcitrant nuclear customers to join. Among these, you say, are Argentina, Brazil, India, Pakistan. Yes, indeed. But what about Israel? Surely leaving Israel out of the non-proliferation argument—which Mr. Carter sees, just as his predecessors did, while providing Israel with nuclear-capable launchers—preserves the nuclear-arms' present non-proliferation policy dangerously unreal. There is after all war going on, either on the sub-continent or in Latin America. In the Middle East there is: and to that extent the nuclear warheads Israel is under stood to have are all the more dangerous.

Elizabeth Young, 102 Reeves Road, W.2.

Competing for foreign orders

from Mr. D. Overton.

Sir,—There seems to have been some slight misinterpretation of my letter (September 22), by your correspondents writing under the titles "Pre-Contract Orders" and "Competing for Foreign Orders" (September 22).

Of course pre-contract analysis must include the impact of all factors such as commercial, political practice. Indeed, it must be inherent in contract negotiation and implementation. Knowledge of the needs of a potential customer is the reasoning behind negotiation. It is also important that the project manager and I should be included at the start where there is a high chance of securing the contract. We are aware that many firms have developed strategies that have been successful in demonstrating that such firms are not just common guide-

IBM trade secrets

from the Chairman, IBM Corporation.

Sir,—My comment in your September 20 story IBM's £27m. damages order will be confusing to your readers, since an essential fact was left out. In addition to the award to Forro Precision, Inc., the jury also found Forro had used misappropriated IBM trade secrets and awarded IBM \$260,777 in damages. What is why I said it is difficult to understand the award to Forro, since the "interference" with Forro's business related to a search of Forro's premises by the police with respect to the IBM trade secrets.

Frank T. Forro, 10504.

Construction efficiency

from Mr. H. Cowan.

Sir,—Labour's National Executive Committee really is badly advised and informed in their pursuit of the extension of public ownership into the construction sector (Michael Cassel, Sept. 28). Mr. Peter Shore and all who may consider this proposition at his Party's conference would do well to consider the political consequences of any such move.

Anyone who thinks objectively about it will realise that the key to efficiency in construction really is private enterprise and individual flair.

I am not attempting to defend the construction industry when I briefly and earnestly suggest that if that proposition ever became a reality it would be the biggest political blunder of that Minister's career.

The essential ingredients for construction efficiency could not exist in any "National Construction Corporation" and in consequence the NEC proposition could only lead to a lamentable waste of national resources.

H. K. Cowan, "Sandon", Park View Road, Pinner, Middlesex.

Theory or fact

from the Director of Works, University of Technology.

Sir,—The reported concern of the Prices Commission about fuel costs has not exactly been reflected in the prices actually charged. The East Midlands Gas Board has recently informed this University that it increases its gas prices to come into effect within the next few days and respectively 25 per cent. and 42 per

Unmentioned activity

from Mr. D. Bett.

Sir,—What a curious article on "What we do in the TV breaks" in your September 29 issue. The main activity is not even mentioned—switching over to have a look at the other programmes! The narrative of the article is summed up by your paragraph which starts "The most important factor established by the survey was undoubtedly the apparent confirmation it provided of the validity of the research method used."

I do not have to explain the contradiction in the phrase "undoubtedly the apparent."

D. T. Bett, 6 Holland Park, W.11.

Standards of security

from Mr. B. Parkes.

Sir,—John Brennan's article concerning industrial security standards within industrial buildings and estates (September 27) contains much fact which risk management assessors, loss prevention specialists, security advisers and design consultants use whatever terminology one will—recognise all too often and many industrial concerns all too late. That apart, based on almost a quarter century's experience of such matters in both the public and private sectors, I assure you that, contrary to an impression gained from the article, self-respecting security advisers have two commodities to offer: they value deeply: knowledge and integrity.

It is with this latter commodity that I am concerned principally to-day and would draw readers' attention to a couple of basic truths: these are that commercial security consultants tend to be more cost conscious in their highly competitive market than the industrialist who has expanded his interest without commensurate human and marketable asset controls.

The security tail should never wag the industrial dog to the detriment of profit, safety, labour relations or any commercial factor. "Six armed guards for every employee" Mr. Brennan? This week and for you I can make a special reduction.

B. Parkes, 77, Merton Avenue, Hillingdon, Middlesex.

Liberals in a squeeze

from Mr. W. Verber.

Sir,—In your leader of September 29 under the heading "Liberals in a squeeze," you rightly say that the supreme benefit the pact has earned for the Liberals is that it has saved them from near extinction, a point unmentioned by Mr. Steel. This is why all the alarms about the continuation or non-continuation of the pact for the reason are nonsense—the unsaid benefit will always prevail. Mr. Steel, however, may have a lot more to answer for than a lot more of omission. If his

Twenty years gamble on £10

from Mrs. M. Deshmah.

Sir,—I have been following with interest the correspondence regarding premium bond prizes, since I have a £10 bond bought just 20 years ago (October 1957) which has never won a prize. At the time I was a domestic, earning £2 10s. (£2.50) a week plus my keep, so that it represented four weeks' earnings. Now it is worth so little it is too much bother to withdraw it.

Occasionally it occurs to me to wonder how much it might be worth now if it had been invested elsewhere.

Perhaps one of your readers would find it an interesting exercise to produce some comparative figures?

M. Deshmah, 29, Carlton Road, S.W.19.

Records for Ernie

from Mr. E. Thornton.

Sir,—The letter from the director of savings (September 28) only partly answers the question I trust, but have no means of knowing that premium bonds I have bought at a post office have been properly recorded. If they have not and Ernie generates one of their numbers how will he ever find my bond? Will the Government Actuary be able to help him in that situation?

E. Thornton, 60, Ormond Avenue, Hampton, Middx.

EEC textile philosophy

from the Chairman, Textile Industry Support Campaign.

Sir,—Let us not shed any tears for the Governor of Hong Kong as he pleads (September 27) with Mr. Edmund Dell for a more liberal EEC textile philosophy. Hong Kong, and many other Far East countries, have had it too good for too long at the expense of 300,000 textile workers who have lost their jobs in the U.K.

The long awaited realism which now pervades the EEC negotiations on the textile trade is indicative of the appalling consequences of being exploited further by such countries. Sir Murray MacLethose should be told so firmly and sent packing.

J. G. Bridge, Oldham and District Textile Employers' Association, Thirlcliffe, 115, Windsor Road, Oldham.

To-day's Events

GENERAL

Labour Party annual conference begins, Brighton.

Sir Keith Joseph, Shadow Cabinet member for policy and research, addresses Conservative trade unionists' meeting, Old

Hamstead Town Hall, N.W.3.

CBI Employment Policy Committee meets, London. Northern Regional Council meets, Newcastle.

Public inquiry resumes into Archway Road development scheme, Central Hall, Archway, N.19.

Official strike by London funeral workers due to begin. Conference on rules governing

commercial exploitation of

Antarctica continues, London.

Retail sales (August, final), Hire purchase and other instalment

exhibitions, Royal Garden Hotel, W.8 (ends October 4).

Lord Mayor of London receives Mr. A. van der Louw, Burgomaster of Rotterdam, at Mansion House, E.C.4.

Commonwealth Library Association centenary conference opens, Royal Festival Hall, S.E.1 (until

October 6).

OFFICIAL STATISTICS

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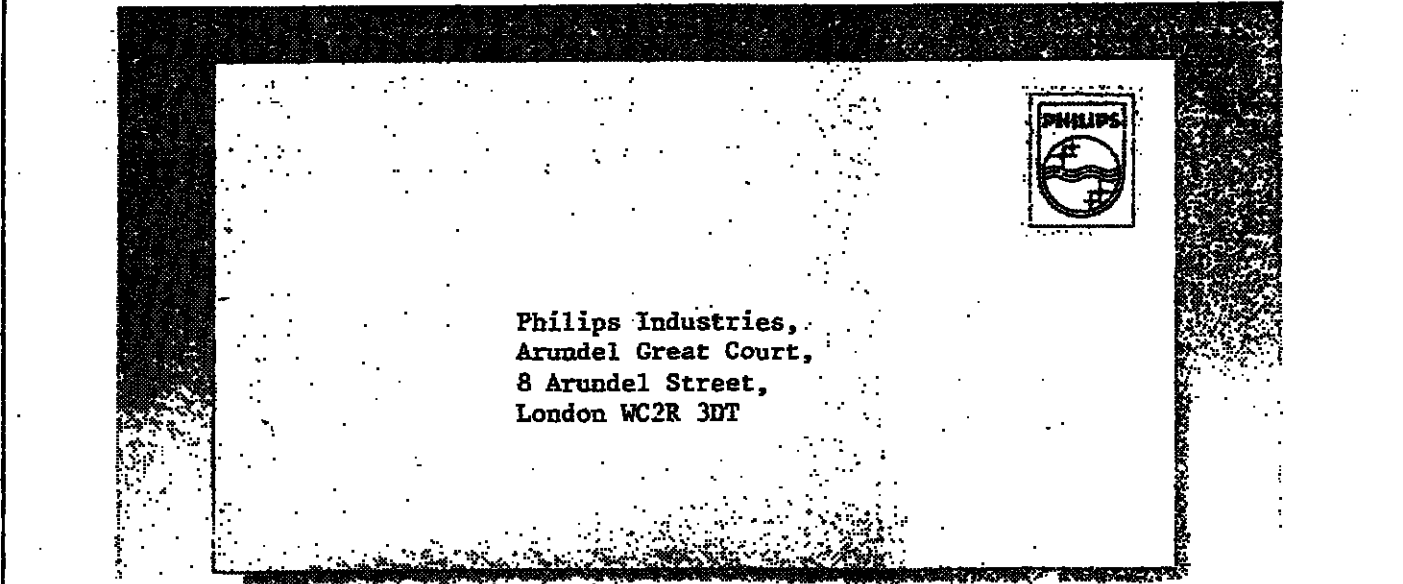
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vice industries (1977 and 1978).



Philips Industries,
Arundel Great Court,
8 Arundel Street,
London WC2R 3DT

An important announcement from Philips Industries.

As from October 10th PHILIPS ELECTRONIC & ASSOCIATED INDUSTRIES LIMITED, (PHILIPS INDUSTRIES) will be at:

**PHILIPS INDUSTRIES,
ARUNDEL GREAT COURT,
8 ARUNDEL STREET,
LONDON WC2R 3DT.
Tel: 01-836 4360 Telex: 267518**

This address will house:-

The Board

Staff Departments previously at

11-12 Hanover Square, London W.1.

Century House, Shaftesbury Avenue, London W.C.2.

COMPANY NEWS

Asda's new stores nearing completion

MIR. A. N. STOCKDALE, chairman of Associated Dairies, says in his annual statement that the first eight months of last year saw trading in both food and non-food sectors at an abnormally high level, but after the Christmas period there was a recession and these conditions prevailed for the remainder of the year.

As reported on August 26 pre-tax profits for the year to April 30, 1977 leapt from £14.7m. to a record £23.9m. and the dividend is lifted to 1.0325p (equivalent 0.03375p). A one-for-three scrip is also proposed.

During the year new stores were opened at Aberdeen, Birkenhead, Coatbridge, Scunthorpe, Plymouth and Dundee. Mr. Stockdale says. The company has commenced trading at Gosport since the end of the financial year, and currently five new stores are in an advanced state of completion, the chairman adds.

In spite of increases in the price of liquid milk, sales for the division were maintained. The company has also increased its sales of milk and dairy products to national customers. The chairman feels that sufficient supplies of liquid milk for manufacture must be maintained so that an adequate return on capital invested in buildings and plant can be realised.

The dairy at Newcastle is now completed, the chairman says, and this will enable the company to rationalise activities in the area. Contractors have started work on the £1.5m. expansion of the West March cheese factory, the purpose being to increase production facilities for cheese and to accommodate modern packing facilities.

Working capital increased by £4.35m (£2.35m).

Alretzing, Leeds, October 26 at 2.30 p.m.

comment

Associated Dairies' report offers shareholders little in the way of comment on prospects, but the outlook is certainly good, even if earnings growth cannot match up to the 45 per cent. compound recorded for the last five years. Physical expansion is being held at around a tenth with another six stores due to be opened before the year end—five of these before Christmas. Gross margins on the other hand will probably be affected by price competition which has followed on the heels of Tesco's price cuts, but cost inflation is moderating and outside estimates are projecting a margin increase at the net level. A revival in consumer spending could add that extra boost to non-food sales.

BOARD MEETINGS

The following companies have notified data of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available until the Board has decided whether dividends are to be paid. The dates of Board meetings are shown below and are based mainly on last year's timetable.

TO-DAY
Interim—Admiral, Audleys, Beaton, Clarks, Cur of London, Brewery and Investment Trust, Evered, Freemans, London & N. International Combustion, Marshall, Cavendish, James, Nall, Wolsingham, Dronze Powders.

Future Dates
Oct. 1—Enland (J. E.) (Wellington)
Oct. 1—Photo 16 International
Oct. 1—South W. R. J.
Oct. 1—Thomson Organisation
Oct. 2—Freemans (Sidney C.)
Oct. 2—Scottish National Trust
Oct. 2—Second Broadmount Trust

All in all pre-tax profits could reach £32m. this year for earnings of around 25p (18.9p) per share. At 372p the prospective P/E drops to a less heady 15, but prospective shareholders will have to forego income. The current yield is under 1 per cent, though this may be in for a big rise if dividend restraint is lifted. The cover on last year's earnings is 18 times and the chairman is on record that a cover of 3 times would be acceptable.

Beaumont revenue increase

PRE-TAX REVENUE of Beaumont Properties for the half year to March 31, 1977, rose from £346,393 to £395,000.

Sir Cyril Black, the chairman, says that in the second-half, pre-tax revenue and trading should show increases, while the reduction in bank rate will have further reduced the net interest payable.

Half-yearly earnings are up from 1.25p to 1.75p per 25p share. An interim dividend of 1.15p (1.1375p) net has already been declared. Total for 1976-77 was 3.1512p and pre-tax revenue £785,684.

Property revenue continues to increase steadily, Sir Cyril adds, as a result of rent reviews and renewals. Profitable trading continues while sales proceeds progressively reduce net borrowings.

Half year
1976-77 1975-76
1976-77 1975-76
Pre-tax revenue 688 647
Pre-tax income 21 28
Less: operating expenses 27 28
Less: interest payable 32 38
Pre-tax revenue 298 286
Taxation 201 204
Net revenue 194 143

Celtic Haven prospects

IN HIS annual statement, Mr. J. A. Rowlett, chairman of Celtic Haven, says that in the current year two wells in the oil exploration programme in the Celtic Sea have already been serviced, and other wells have been talked about.

The company also expects to make profits from other water-front activities, "and these undoubtedly could be expanded if there was no more exploration to service off-shore," he adds.

On the marine engineering side some improvement is now being shown after the disappointing results in the past year and the Barn Lake subsidiary is currently working through an order for 34 cargo carrying barges valued at £1.65m, which should keep it occupied with other work until midsummer, 1978, the chairman says.

As reported on September 27 pre-tax profit for the year to March 31, 1977 rose from £61,898 to a record £101,068, and the annual dividend is raised from 0.2652p to 0.28916p net per share.

Mr. Rowlett points out that the long-awaited exploration programme in the Celtic Sea produced a crop of four wells for the group to service including the Shell's well, which was shared jointly with another company. The supply based company turned a loss of more than £200,000 into a profit of more than £109,000, he adds.

Working capital increased by £28,000 (£152,000 decrease). Meeting, Burton, November 4.

After tax £50,348 (£31,432) net profit emerged as £52,226 (£34,489). There was an extraordinary credit for the first half 1976 of £51,385.

The company's activities include the manufacture and sale of civil and military regalia.

Parker Timber progress

TURNOVER for the first five months of the current year at Parker Timber Group is 121 per cent. higher than for the corresponding period, and Mr. K. Whitby, the chairman, tells members in his annual statement that he hopes a further successful year will be enjoyed by the group.

As reported on September 2, external sales advanced from £31.57m. to £41.06m. for the year to March 31, 1977, and pre-tax profits were ahead at £2.74m. (£2.65m.).

Since the year-end the company has purchased additional land at Rutherford and Pinxton, and a new branch of Parker Timber (Plywood) was opened in June at Leicester. Parker International has the largest order book in its history and the storage and handling divisions are up to capacity, says the chairman.

Mr. Whitby reports that in Depeford major plans are under way, including three new factory buildings and a new saw mill, which will increase the efficiency and capacity of the timber and plywood divisions. Also, a new carton manufacturing division has been opened in Dukinfield.

A statement of source and application of funds shows that working capital increased by £2.8m (£0.8m.).

Meeting, Erith, Kent, October 28 at noon.

Calcutta Electric

GROSS REVENUE of Calcutta Electric Supply Corporation for the year ended March 31, 1977 rose from £36.41m. to £52.39m. subject to expenditure, including depreciation, totalling £45.92m, against £33.57m. and pre-tax revenue expanded from £2.24m. to £3.68m.

The dividend is stepped up to 13p per £1 share compared with 12p with a final of 6.75p.

1976-77 1975-76
Gross revenue 52,392,248 36,411,994
Expenditure 45,919,396 33,563,641
Balance 6,472,732 2,848,353
Dep. interest 678,191 397,823
Other interest 16,141 5,381
Pre-tax revenue 5,787,400 2,445,545
Income tax 1,948,572 934,623
Net revenue 3,838,828 1,510,922
Provision 118,375 —
Sustenance reserve 285,435 141,689
Development reserve 234,794 —
General reserve 397,345 —
Preference dividend 600,000 590,000
Investment allowance 114,000 114,000
Ordinary dividend 534,144 311,218
Carried forward 71,943 71,943
+ Deferred Ordinary dividend and bank overdraft, + including annual appropriation to deferred tax. 1 For doubtful debts

Toye rises midway to £103,574

In the first half of 1977, sales of Toye and Co. rose from £2.03m. to £2.37m. and profits were up from £65,921 to £103,574.

And the directors believe that trading in the second half will continue to be reasonable. For the year 1976, group profit was £104,000 and a dividend of 0.8125p was paid.

REPORTS TO MEETINGS

Fraser Ansbacher reducing loans

Sir Samuel Goldman, who last November became chairman of the Fraser Ansbacher financial and banking concern, told the annual meeting of further developments in the process of disengagement in certain sectors by the group, which last year incurred a net loss of £4.1m. after extraordinary items.

The amount outstanding on property loans on the Henry Ansbacher banking subsidiary on which interest is suspended, is down from £12m. to under £1m. The remaining loan is secured on one house-building site which is under offer; when the sale is completed, these loans would be fully eliminated. Other disposals were being negotiated or discussed.

Shareholders formally approved the £4.2m. loan note issue, and subscription to the notes was afterwards made in accordance with the letter to shareholders of September 7. Following receipt of the £4.2m., Fraser Ansbacher subscribed an additional £1m. of capital in Henry Ansbacher, raising the total to £8m.

The following extracts are taken from other chairmen's reports to shareholders at recent meetings. Wagon Industrial—Mr. Leslie Smith said he was optimistic about the coming year and saw a return to steady advancement. Last year the group recorded a slight drop in profits.

Scottish, English and European Textiles—Group management accounts for the first four months of the year to September 30, 1977, showed a profit of £1.1m. after tax, compared with a loss of £1.1m. in the corresponding period of 1976. Therefore Mr. J. H. M. MacKenzie expected that the full year should

show a further set of satisfactory results, with assets again improving materially. This should enable the group to carry on with the re-equipment programmes.

Longton Transport (Holdings)—Mr. Edward Dale said the first quarter showed a modest increase over last year, and at the year-end he hoped that results would show the directors' current optimism.

F. H. Tomlinson—Sales were expanding in spite of acute competition and profit margins being squeezed. But Mr. C. Garman expressed confidence that first half profit would show a satisfactory improvement over last year and should not be maintained for the rest of the year. "I shall be extremely disappointed if we do not break through the £1.5m. profit barrier in the present financial year."

Gordon and Gatch Holdings—Sir Anthony Percival reported that to the end of September the initial figures from all the divisions put the group substantially above the profits earned during the first four months of the year.

While rising costs remained a threat, he felt confident that the trend would continue, at least, until the early months of 1978. The Board intended, where declaring the interim dividend, to pay at one to the whole of maximum permitted, that was approximately 2.5p. Then, after July 1978 it was planned to pay a second dividend of the same amount again. In that manner shareholders could anticipate a dividend twice as great as that received during 1977.

ISSUE NEWS

Midland Bank statistics

Statistics compiled by Midland Bank show that the amount of "new money" raised in the U.K. by the issue of marketable securities in September was £136.3m. an increase of £22m. on the month of August. In the first nine months of this year £1,063.1m. has been raised compared with £1,327.3m. in the same period of 1976.

Local authorities accounted for 37 per cent. of the month's total. Bond issues totalled £28.8m., and there were three stock issues, two by Islington Corporation (£22.4m.) and one by the London Borough of Southwark (£29.8m.).

The amount raised by company

issues was the highest since May, the total increasing from £38.2m. last month to £88.3m., the largest sums being raised by BOC International (£41.2m.) and Tube International (£40.8m.). Of the eight company issues, seven were rights issues totalling £87.5m. In the first nine months of 1977, company issues represented 62 per cent. of the total amount raised, and of this over four-fifths has been accounted for by rights issues.

BOC—90.5%
The £40m. rights issue by BOC International has been taken up as in 90.5 per cent. The balance has been sold.

Matthew Hall forms new subsidiary

IN VIEW of increasing international activities, Matthew Hall and Co. has decided to form a new subsidiary, Matthew Hall International Developments, to co-ordinate group sales, to arrange contact and entry in overseas markets for all group subsidiaries and to pass on international intelligence.

The group at present has a very healthy and expanding order book and service and management contracts in excess of £200m. have been won in the U.K. and overseas during the first nine months of this year.

SENA SUGAR

Preference shareholders of Sena Sugar Estates will have to continue waiting for their dividends. They were last paid for the three months ended March 31, 1975.

SIMCO MONEY FUNDS

(Sutton Investment Management Co. Ltd.)
Rates for deposits of £1,000 and upwards for w/e 21.10.77
7-day Fund % p.a.
Mon. 5.675
Tues. 5.693
Wed. 5.589
Thur. 5.560
Fri./Sun. 5.540
3-Month Fund
Wed. 5.250

Shake-out at Companies House

BY CHRISTINE MOIR

THIS WEEK-END the first stages of the Companies Act 1976 took effect. Now all public companies will have to produce annual accounts no later than seven months after their financial year ends and private companies within 10 months.

Under the old legislation companies were simply required to file an annual return within 12 months, and a loophole in the Act meant that financial accounts only needed to be attached if they had been laid before members at the annual meeting. The loophole gave rise to a certain amount of evasion—it was even called a "scandal" by one MP—hence the new tougher rules.

Not least among the implications of the new regulations is the extra work it imposes on the Registrar of Companies. Even the old lenient requirements kept a computer in Companies House chattering out demands and reminders full time. Now it will have to be reprogrammed for a faster cycle and more information.

Although the Registrar is not complaining, the extra burden comes when staff are already stretched with a massive programme of transferring all 30m. documents in 600,000 files to microfilm.

About 80 per cent. of the files have now been transferred but those left, the files on the longest established companies, contain old and often defunct documents. These present special difficulties in filing which has slowed down the programme. The Registrar now believes that completion will not be before the turn of the year.

Ante-time the whole concept behind this micro-filming, which was claimed in 1975 by the Department of Trade to "provide a speedier and more efficient service" for company researchers, has come in for continuous grumbles.

Illegible or blank film, misfiled sheets of film (and each sheet contains dozens of documents) and lengthy waiting periods were the main complaints. At one stage some major users were claiming that as many as 20 to 30 per cent. of their searches contained errors. As the complaints mounted the Users' Committee—which represents the more frequent company level of legitimacy which will be searched such as Dun and Bradstreet—has been more standardised.

The Registrar looks forward to the day when all major users linked to Companies House microfilm readers and who searches will become infrequent. This trend will be accelerated when the second part of the Act comes into force, requiring companies to present their accounts on weights of paper, and a level of legibility which will be more standardised.

NORTH EAST COAST SHIPREPAIRERS IN FIRST HALF

The 65 per cent. preference dividend of North East Coast Shiprepairers which otherwise would have been payable at September 30, 1977 will not be paid. This decision was reached having regard to the adverse trading conditions experienced by the company.

COPYDEX LOWE IN FIRST HALF

The trading surplus at Copydex dropped from £116,000 to £21,000 for the first half of 1977. The net interim dividend is £0.23m.

FINANCE FOR INDUSTRY TERM DEPOSITS

Deposits of £1,000-£25,000 accepted for fixed terms of 3-4 years. Interest paid gross, half-yearly. Rates for deposits received no later than 7.10.77.

Terms (years) 3 4 5 6 7 8 9 10
Interest % 9 10 10 10 11 11 11 11

Rates for larger amounts on request. Deposits to and further information from The Chief Cashier, Finance for Industry Limited, 91 Waterloo Road, London SE1 8XP (01-928 7822 Ext. 177). Cheques payable to "Bank of England a/c FFI". FFI is the holding company for ICFC and FCI.

ANDERSON & CO.,

MEMBERS OF THE STOCK EXCHANGE

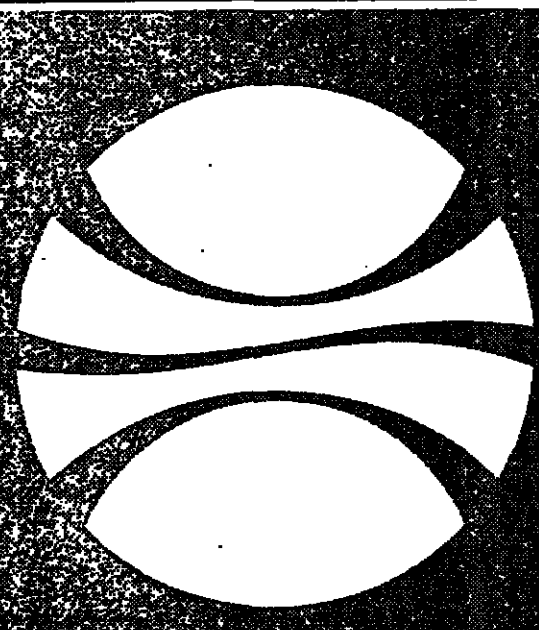
Announce the opening of their Office

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13, ARCADE STREET, IPSWICH

Telephone : (0473) 210264/5

For a brochure describing the services we offer to private clients, pension funds and professional advisers, please contact Paul Gale.



SANYO SECURITIES CO., LTD.

have pleasure in announcing that their London Representative Office has changed to BRANCH OFFICE status from the beginning of October, 1977

Mr. Yoshio Miyake, Chief Representative, assumes the responsibilities of General Manager and he and his colleagues look forward to giving you any assistance which you may require in the future

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Telephone 638-3988/3990 Telex 8812979 SYSEC

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100 Wall Street, New York, NY 10005 U.S.A. Telephone: 212-344-3540

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This advertisement complies with the requirements of the Council of The Stock Exchange of the United Kingdom and the Republic of Ireland.



Western Mining Corporation Limited

(Incorporated with limited liability under the Companies Act 1928 of Victoria)

U.S. \$50,000,000

9 per cent. Bonds 1992

Issue Price 100 per cent.

The following have agreed to subscribe or procure subscribers for the Bonds:—

S. G. Warburg & Co. Ltd.

Banque de Paris et des Pays-Bas

Dresdner Bank Aktiengesellschaft

IBJ International Limited

Morgan Stanley International

Swiss Bank Corporation (Overseas) Limited

The \$50,000 Bonds of U.S. \$1,000 each constituting the above issue have been admitted to the Official List of The Stock Exchange. Interest is payable annually on 15th October in each year, the first such payment being due on 15th October, 1978.

Particulars of the Bonds are available from Exel Statistical Services Limited and copies may be obtained during usual business hours up to and including 21st October, 1977 from the Brokers to the issue:—

Hoare Govett Ltd.,
Atlas House,
1 King Street,
London EC2V 8DU.

3rd October, 1977

Fresh fighting fuels Fraser fracas

BY LODESTAR

sold for blending purposes. Pac-Sees it as ripe for expansion while it is also being by Buxx - nearby Mitchell's First area where exploratory drilling has indicated substantial quantities of oil at very well quality cost. Great Greta is well situated in relation to rail and support facilities.

Share conundrum

Pacific Copper is thus adding call to mineral interests which already include a wolf in sheep's clothing. The company's share price, once a solid stake in the Canadian gold market in the same state in which France's Estel is the operation.

But the share conundrum remains. In the context of the precious metal relationship between Pacific Copper Mines and Golden Cone - either the former goes \$2.50 in Toronto, are too high or the latter at 40 in London, are too low.

The silver - a minority - built

But it will indeed be interesting if some of the buyers who have been rushing into ECM do not realise that they are on the wrong foot and start switching into P.

[illegible]

beyond that, says a source, is convincing that the U.S. Treasury will resume its sales even the threat of which would certainly have a strong psychological effect on the

So it might be as well to remember that in the producers' shares, especially South Africans, there should be no harm in taking at least part of the lucifer profits that have accrued since the turn of the year, with some issues more than doubling in price.

and goats

goats

have taken place in committee, where principles and details have been agreed. These have also been accepted by regional chairmen.

New members' meetings have been arranged to consider the detailed proposals and, says Airt Teale, it is hoped that full agreement will be reached in time for a single broking body to emerge on January 1, 1978.

Standing apart from this merger at present is the Corporation of Mortgage Finance and Insurance Brokers, which represents 300 firms and 400 individual members.

Not being a broker, it does seem to me that an association embracing at one end the international broking giants and at the other the small, almost invisible

insurance broker can at best be an uneasy marriage and at worst must have the causes of future divorce in-built.

Maybe I have got it wrong. But there does seem to be a deal of over-optimistic euphoria in the upper echelons.

The proof of the pudding is in the eating. The worth of the middle-man, the broker, comes out in the long run. It is his life-time success in the quality and efficiency of the service he provides bringing policy-holders and insurers together, negotiating cover and terms, solving problems and assisting in the development of new forms of protection.

At this stage, the skeptic might be forgiven for thinking that despite their newly ordered enshrinement with their appointment letters, the new brokers are unlikely only once again to prove the correctness of the statement

plus Ça change plus Ça même
chose.

ND SUPPLY TO MANCE

from abroad with a view to

helping our manufacturers to win back at least the share of the home market which they have lost in recent

"The Institute has much to offer and we shall harness the skills, experience and knowledge of our employees for the public good. We seek to participate more extensively and effectively in public life and pledge our fullest co-operation to Government, to national bodies such as NEDCO, to sister professional bodies and to any other organisations which ask for our assistance in the national interest.

We will strive for greater corporate recognition of the Purchasing and Supply function and will aim to ensure that in due course all positions of responsibility in our fields of activity in both the public and private sectors are held by properly qualified professional people. We do not plan to have a monopoly of integrity, but we believe that with their professional education, training, practical experience and sense of ethics (now reinforced by the Institute's Ethical Code) our members are well equipped to cope with the dangers and responsibilities of the Society in which we have to conduct our business affairs."

But it will indeed be interesting if some of the buyers who have been rushing into ECM do not realise that they are on the wrong foot and start switching into P.

which are guaranteed to be a first-class market in Australia with a large number of local buyers about to appear. The price of the wool is bound, however. This is what the new funds will no doubt be very interested in. It is quite possible that the P.M. would immediately have to pay the price of the wool, but the strike in the Australian oilfields is now about 43 per cent.

I notice a note of caution creeping into the pronouncements of the price of the wool since the price broke above \$100 a bale in New York on Friday night.

True, there are still some hopes pronounced that \$100 may be reached by the year-end but

beyond that, says a source, is that the U.S. Treasury will resume its sales even the threat of which would certainly have a strong psychological effect on the

So it might be a well to remember that in the producers' shares, especially South Africans, there should be no harm in a share at least part of the future profit that have accrued since the turn of the year, with some issues more than doubling in price.

MR RUSSELL CORRESPONDENT

And goats

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Not being a broker, it does seem to me that an association embracing at the one end the mortgage and insurance giants and at the other, the high street, money

insurance broker can at best be an uneasy marriage and at worst must have the causes of future divorce in-built.

Maybe I have got it wrong. But there does seem to be a deal of over-optimistic euphoria in the upper echelons.

The proof of the pudding is in the eating. The worth of the middle-man, the broker, comes out in the long run. It is his influence in the quality and efficiency of the service he provides bringing policy-holders and insurers together, negotiating cover and terms, solving problems and assisting in the development of new forms of protection.

At this stage, the skeptic might be forgiven for thinking that despite their newly ordered ensembles, with their appointed "ladies" and "gentlemen," they are unlikely only once again to prove the correctness of the statement

plus Ça change plus Ça même
chose.

ND SUPPLY TO MANCE

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sold for blending purposes. Pacific sees it as ripe for expansion while it is also expected by Buxton, nearby. Other than this area, there are no exploratory drilling has indicated substantial deposits of open-pit, high-quality coal. Great Grita is well situated in relation to rail and export facilities.

Share conundrum

Pacific Corp. is thus adding credence to mineral interests which are being sought by a number of New South Wales and other big state, stake in the Grita project, old project in the same state in which Europe's E.ON is the operating partner.

But the share ownership remains: In the context of the positions market relation-size outflows Pacific Group Mines and Energy Co., the former paid \$2.50 in Toronto, are two-thirds of the latter at 44¢ in London, are two-thirds of the latter.

The prospect, a vintage of both

claimed \$125.00
argument of son

been rushing into PEM do not realise that they are not the only ones to be disappointed. The price of gold, which are reported to be a close market in Australia with regard to local buyers about \$100 a gram, however, this is the wrong mind, however. This is not the case, funds will no doubt be needed if PEM raises new capital monthly, and it is not clear how much, but it is probably less than \$500 million in order to sustain its stake in the Australian oilfield, now about 43 per cent.

Some of the more of caution, especially in the circumstances of some of the gold prices since the price broke above \$150 in 1979 was \$124.00 in New York on Friday night.

Gold prices are still being pronounced that \$100 are not reached by the year-end but beyond that four are growing, that the U.S. Treasury is aware of the threat of a recession, and the threat of which would certainly have a strong psychological effect on the bullion market.

So it might be a well to remember that in the products share, especially South African, there should be no harm in taking at least part of the bullion profits that have accrued since the turn of the year, with some issues more than doubling in price.

INSURANCE

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ation Council

The proof of the pudding is in the eating. The worth of the middle-man (the broker, consultant, call him what you like) lies in the quality and efficiency of the services he provides: the broker brings policy-holders and insurers together, negotiating cover and terms, solving problems and assisting in the development of new lines of protection.

At this stage, the skeptic might be forgiven for thinking that, despite their newly ordered clothes with their by appointment labels, the brokers are no different from the peddlers of the gutteriness of the shantytown.

me the registrar
complete and

ND SUPPLY TO MANCE

from abroad with a view to helping our manufacturers to win back at least the share of the home market which they have lost in recent years.

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President:

A FINANCIAL TIMES SURVEY



To be published on
October 20 1977
To coincide with the
British Phonographic
Industry's
'Britannia Awards'

The Financial Times is planning
to publish a survey on 100 Years
of Recorded Sound. The main
headings of the provisional
editorial synopsis are set out
below.

INTRODUCTION Impact of recorded sound and later broadcasting on social, political and cultural life throughout the world: development and uses of sound reproduction.

THE GRAMOPHONE Development of the gramophone during the past 100 years: the main figures involved.

THE RECORD Development of the record: technical problems overcome and the present state of technology.

THE RECORD INDUSTRY Fierce competition within British record business: an examination of the rivalry between companies.

TAPE Domination of cassettes in popular tape market in Britain: argument within the industry over standards and acceptance: by hi-fi purists: roles of reel-to-reel and cartridge systems.

EQUIPMENT A view of the market place: record decks and ancillary equipment: tape decks: amplifiers: speakers: music centres.

RECORDED SOUND IN EDUCATION The use of recorded sound for teaching languages and other subjects: its advantages and drawbacks.

THE SOUND RECORDING STUDIOS Recording technology has come a long way in 100 years: examination of the sound recording studios of the U.K. and the market within which they operate.

QUADROPHONICS A "state of the art" analysis of developments. With rival systems competing for public attention, broadcasters are beginning to enter the field with their own ideas.

RECORDED MUSIC AND MUSICIANS The help or hindrance to musicians of the development of recorded sound: the artistic implications of having a

wide range of interpretations and performances available to consider: the employment implications of high quality recorded sound being available as an alternative to the concert platform and dance hall.

RADIO Dependence on recorded sound: use of recording facilities in various countries: control of the amount of recorded music and the differing broadcasting moods produced.

RADIO IN BRITAIN After Annan, broadcasters and the public are paying close attention to the future of radio: development and likely future trends.

RECORD SHOWS The Top Twenty and playlists: the programming decisions and the record industry's views of the present system.

RADIO EQUIPMENT The radio market in commercial terms and an assessment of the type of equipment available today.

BACKGROUND MUSIC The usefulness and acceptability of recorded music in working and leisure settings: the strengths and weaknesses: the current state of the market.

DISCOTHEQUES Professional operators, running several centres, now beginning to emerge: an examination of the money and management in this field.

THE FUTURE The threat to sound as an independent sensory source with the rapid development of audio-visual systems, including cassettes/discs, Teletext, Videodata and holography.

The proposed publication date is October 20 1977.
Copy date is October 6 1977.

For further information of the editorial synopsis and of advertising rates contact: Suzanne Ralph, Financial Times, Bracken House 10 Cannon Street, London EC4P 4BY.

Tel: 01-248 8000 Ext. 201
Telex: 885033 FINTIM G

FINANCIAL TIMES
EUROPE'S BUSINESS NEWSPAPER

The content and publication dates of Surveys in the Financial Times are subject to change at the discretion of the Editor.

BIDS AND DEALS

Complaints over trust situation

Stockbrokers specialising in the investment trust sector are complaining that they have still had no clarification over the bid situation surrounding the 200m. Edinborough and Dunlop Investment Trust, which is part of the Scottish Bailie Gifford stable.

On September 20, it was announced that an approach had been received which could lead to an offer being made for the trust, though with no mention of the identity of the bidder nor of the likely terms.

Several names have been mentioned in the market, mainly on the pension funds front.

KELLOGG BUYS
Favorite Food Products, an associate of the Kellogg Company of Great Britain, has acquired the assets of Rhodes Frozen Foods, the Skelton-based frozen bread dough company.

WINN INDS.
Winn Industries has acquired Bowers and Jones for £340,000, satisfied as to £225,074 cash and the issue of 288,000 Ordinary shares.

Value of assets acquired at March 31, 1977, was £215,225. Profits for that year, before tax, came to £96,373.

STEPHENSON BROS.
Stephenson Brothers of Bradford has reached agreement with Beechwood Brushers, a subsidiary of Sanitex Group, for it to acquire the business assets of Stephenson's Paint Roller Division. The division's production is

being moved to larger premises in Bradford, enabling Stephenson to concentrate on its rapidly expanding chemicals side based at Bradford and Horsforth.

T & N AND DUNLOP IN SPANISH VENTURE
Turner and Newall has taken a 40 per cent. stake in a new Spanish company, TBA Iberica SA, established with a capital of 60m. (£40,000,000). The remainder of the equity is held by Dunlop Iberica SA, which is owned half by Dunlop International and half by local Spanish interests.

The new company will manufacture the TBA range of Permatite compressed asbestos fibre jointings, which are the basis of automotive and industrial gaskets, in a plant on Dunlop Iberica's factory site at Bilbao. The product will be marketed by Dunlop Iberica in Spain and by the export organisation of T & N's subsidiary TBA Industrial Products elsewhere.

BROWN BROS.
Bana Corporation has purchased a further 70,000 Ordinary Shares (0.2 per cent.) in Brown Brothers Corporation, thereby increasing its holding to 31,688,377 shares (80 per cent.) of Brown.

WILMOT BREEDEN
Telehoist, the Cheltenham hydraulic tipping gear and vehicle body manufacturers, is to co-

operate with ACS Engineering, the Nottinghamshire-based makers of hydraulic platforms, following the purchase of ACS Engineering by Wilmot Breeden (Holdings). Telehoist's parent company.

The purchase price of £540,000 for the capital of ACS is subject to adjustment and is payable as to £300,000 in cash on completion, with the balance to be paid during 1978. Telehoist has acquired for a further 250 Ordinary Shares (0.2 per cent.) in ACS Engineering (Sales) of Stamford Lines, the marketing company for certain ACS products.

SHARE STAKES
United Spring and Steel Group, Rayner's Investment Management through its subsidiary Throgmorton Trust, holding 488,730 shares has by virtue of the recent issue of shares, cent. or more of the capital.

United Kalgum Property Company, having sold 100,000 shares in Lazard Bros. and Co. are the beneficial owners of 2.3m. shares (5.48 per cent.). The holding is in the name of Minden Securities.

George Deland, Maurice James Industries bought 20,000 shares on September 23 making holding 1,779,646 shares.

Roma Tea Holdings, George Williamson and Co. between June 30 and September 28 bought 4,829 shares and now own 114,445 shares (29 per cent.).

Berry Trust Company, Post Office Superannuation Fund has bought a further 250,000 shares making total holding 1.3m. shares (8.6 per cent.).

Dixons Photographic, wife of Mr. C. J. Dixons transferred 40,000 shares to a family charitable trust, Mr. P. Kalm and Mr. C. Kalm, as joint trustees have transferred a non-beneficial interest in 10,000 shares to a

family charitable trust, Mr. H. S. Kalm, has transferred 10,000 shares to a family charitable trust, Mr. H. S. Kalm and Mr. P. Kalm, as joint trustees have acquired a non-beneficial interest in 60,000 shares.

Stewart and Wright Country and Commercial Property Investments, in which Michael J. Conn, director of Stewart and Wright, has an interest has bought a further 250 Ordinary Shares (0.2 per cent.) in ACS Engineering (Sales) of Stamford Lines, the marketing company for certain ACS products.

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Roma Tea Holdings, George Williamson and Co. between June 30 and September 28 bought 4,829 shares and now own 114,445 shares (29 per cent.).

Berry Trust Company, Post Office Superannuation Fund has bought a further 250,000 shares making total holding 1.3m. shares (8.6 per cent.).

Dixons Photographic, wife of Mr. C. J. Dixons transferred 40,000 shares to a family charitable trust, Mr. P. Kalm and Mr. C. Kalm, as joint trustees have transferred a non-beneficial interest in 10,000 shares to a

family charitable trust, Mr. H. S. Kalm, has transferred 10,000 shares to a family charitable trust, Mr. H. S. Kalm and Mr. P. Kalm, as joint trustees have acquired a non-beneficial interest in 60,000 shares.

Stewart and Wright Country and Commercial Property Investments, in which Michael J. Conn, director of Stewart and Wright, has an interest has bought a further 250 Ordinary Shares (0.2 per cent.) in ACS Engineering (Sales) of Stamford Lines, the marketing company for certain ACS products.

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NEW ISSUE

All of these securities having been sold, this announcement appears as a matter of record only.

September 30, 1977

\$100,000,000

New Zealand

Seven Year 7½% Notes due 1984

Kidder, Peabody & Co.
Incorporated

Bache Halsey Stuart Shields The First Boston Corporation Basle Securities Corporation Blyth Eastman Dillon & Co.
Dillon, Read & Co. Inc. Drexel Burnham Lambert EuroPartners Securities Corporation Goldman, Sachs & Co.
Hornblower, Weeks, Noyes & Trask E.F. Hutton & Company Inc. Kuhn Loeb & Co. Lazard Frères & Co.
Lehman Brothers Loeb Rhoades & Co. Inc. Merrill Lynch, Pierce, Fenner & Smith Nomura Securities International, Inc.
Paine, Webber, Jackson & Curtis Reynolds Securities Inc. Salomon Brothers Smith Barney, Harris Upham & Co.
SoGen-Swiss International Corporation UBS-DB Corporation Warburg Paribas Becker
Wertheim & Co. Inc. White, Weld & Co. Dean Witter & Co.
Arnhold and S. Bleichroeder, Inc. Bear, Stearns & Co. L.F. Rothschild, Unterberg, Towbin
Shearson Hayden Stone Inc. Weeden & Co. Wood, Struthers & Winthrop Inc.
Alex. Brown & Sons Cazenove Incorporated Robert Fleming Kleinwort, Benson Moseley, Hallgarten & Estabrook Inc.
New Court Securities Corporation Oppenheimer & Co. Inc. R.W. Pressprich & Co. Scandinavian Securities Corporation
Thomson McKinnon Securities Inc. Tucker, Anthony & R.L. Day, Inc. Wood Gundy Incorporated A.E. Ames & Co.
Bateman Eichler, Hill Richards William Blair & Company J.C. Bradford & Co. Burns Fry and Timmins Inc.
Crowell, Weedon & Co. Dain, Kalman & Quail Daiwa Securities America Inc. Dominion Securities Inc.
Fahnestock & Co. First of Michigan Corporation Loewi & Co. McDonald & Company The Nikko Securities Co.
Piper, Jaffray & Hopwood Pitfield, Mackay & Co. Inc. Prescott, Ball & Turben
Rauscher Pierce Securities Corporation The Robinson-Humphrey Company, Inc. Rotan Mosle Inc.
Shuman, Agnew & Co., Inc. Stern Brothers & Co. Wheat, First Securities, Inc. Yamaichi International (America), Inc.
Adams & Peck Craigie Incorporated Ferris & Company Freeman Securities Company, Inc.
Investment Corporation of Virginia Janney Montgomery Scott Inc. Lepercq, de Neufville & Co. Parker/Hunter
Stone & Youngberg Thomas & Company, Inc. Burton J. Vincent, Chesley & Co.

AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

(Incorporated with limited liability in the State of Victoria, Australia under the Victorian Companies Act 1961)

Authorised Share Capital Issued
\$A100,000,000 Shares of \$A1 each \$A72,104,734

The Council of The Stock Exchange in London, the member exchanges of the Australian Associated Stock Exchanges and the Stock Exchange Association of New Zealand have granted listings for all the issued shares of \$A1 each of Australia and New Zealand Banking Group Limited ("the Bank"), which shares have been substituted for the same number of shares of \$A1 each of A.N.Z. Group Holdings Limited pursuant to the Scheme of Arrangement dated 26th August 1977, which became effective on 30th September, 1977. Particulars of the Bank have been circulated by E-tel Statistical Services Limited, and copies may be obtained during usual business hours on any weekday (Saturdays and public holidays excluded) up to and including 17th October, 1977 from:-

Australia and New Zealand Banking Group Limited,
71 Cornhill, London EC3V 3PR.

Cazenove & Co.,
12 Trenchard Street, London EC2R 7AN.

Hoare Govett Limited, R. Nivison & Co.,
Atlas House, 25 Austin Friars,
1 King Street, London EC2N 2JB.

F. S. RATCLIFFE INDUSTRIES LIMITED

Extracts from the Chairman's Statement at the Annual General Meeting in Rochdale on 30th September, 1977

I report with pleasure on a more successful year than the last year, Group Turnover being £1,475,683 compared with £1,383,667 in 1976.

Group profit before taxation amounts to £176,163 compared with £97,668 last year.

Your Board recommends the payment of the maximum permitted dividend of £2.70p per share, making a total for the year of 4.70p (1976 2p per share).

Pre-tax profit of Arthur Lord & Sons Ltd. was £32,706 compared with £33,830 in 1976. Our thanks are due to the directors for such a satisfactory result in difficult times.

Our forward order book is very satisfactory and we are having to prepare for increased production, which will necessitate the purchase of additional plant and machinery.

Ratcliffe

Crawford Spring Works, Norman Road, Rochdale.
Tel: Rochdale 40415.

Fleet Street pay claim talks to-day

FLEET STREET. Manchester
Glasgow journalists repre-
sentatives meet to-day to con-
sider the national pay claims
history of the national newspaper
industry on the 12-month rule by
the National Union of Journa-
list executive.

All members in Fleet Street
have been delaying acceptance
Phase Two awards in the hope
of securing more generous
offerings. The return
free collective bargaining,
though TUC policy states that
groups due to settle within
the two must do so.

An executive meeting on
Friday, a motion urging the
industry to put the TUC position
to the construction of the office
was defeated.

A executive passed instead,
the opposition, a motion
"note" of the TUC
are will be pressure on the
national newspaper and
industrial council to

clarity the meaning of this
motion when it meets to-day.

Mr. Ken Ashton, the new NUJ
general secretary, would only say
that having looked at the
national situation, the execu-
tive felt at the best it could go
to note the TUC decision.

Despite the vagueness of the
motion's wording it appears un-
likely that the NUJ executive
would support industrial action
in Fleet Street office which
tried to breach the TUC guide-
lines.

Chapels will now be told to
continue negotiations on house
agreements with individual
managements. Some already
submitted contained terms for
increases of between 20 and 35
per cent, but deal also with
conditions and other issues as
well as pay.

The complication over TUC
policy applies only to national
newspaper agreements and the
union will begin negotiations
outside Phase Two on behalf of
the members in the provincial
newspaper fields later
this month.

OUR LABOUR CORRESPONDENT

THE Conservative Party's attitude to the closed shop, despite its opposition to the use of closed shops, an attempt to harm could be "not only active but sometimes even lul" is spelt out in a book published by the Conservative Party's Department to-day.

The evidence suggests that "all agreements containing such formal ones are banned," and "They may restrict the dual's right to work far than an open agreement is regulated and limited."

Therefore intended by the book to be a "strong protection for the individual," should be produced to closed shop negotiations. "any agreements did not adequate safeguards will be prepared to legislate against them."

Q. Q. A—50 Questions answered.

The code would provide for a "strong ballot" of all workers involved before the introduction of a closed shop agreement. Individuals with "strong personal convictions" against joining a union would be exempt from the existing non-union clause in a company where a closed shop was established would not be forced to join.

People unfairly dismissed for refusing to join a union would be eligible for compensation from the employers and those with "strong personal convictions" against joining—or those arbitrarily expelled or excluded from membership—would have the right of appeal to a legal tribunal.

The proposed code would also protect the rights of members of a union whose codes of conduct forbid them from taking part in industrial action.

ERS OF Britain's £30,000-
are to meet Mr. Shirley
in the House of Commons
this month as part of
ign to restore the cuts in
tion budgets imposed over
last two years.

The campaign is organised by
Council for Educational
a pressure group which
is the main teaching
s and other educational
Friends of the Schools

Teachers will be holding public
meetings and lobbying MPs and
councillors throughout the
country to draw attention to the
effects of the cuts.

The campaign will highlight
the "five body-blows" in the
past few years when individual
cuts totalling almost £1,500m
were made. The series of
action is planned to begin on
October 17.

The seasonal preview of Italian bags, handbags, bags for men, travel bags, small leather items for buyers from all over the world. The event is organized by Mipel S.p.A.

Admission restricted to buyers only.
On October 24 the event will close
at 2 p.m.

For information: Mipel S.p.A.
43, Viale Beatrice d'Este - 2
(Italy) - Tel. (02) 540181 - 58

TOURIST EXCHANGE

of Equipment for Tourist and Catering Trade.

Special electronic equipment will continuously serve the tourist accommodation market.

To coincide with EXPO/TURISMO-International Expo '86, 23-30 October, at Milan Fair-will also be held, at the premises, the INTERNATIONAL TOURIST EXCHANGE organized by the Italian Ministry of Tourism and Entertainment.

The Exchange will operate through a system of storage cards containing information both for demand and supply.

The Exchange Secretariat will arrange to display bookings, while the ones not immediately matched appear in programs and information bulletins.

Exp. data, as remaining market requirements will be stored on computers, kept up to date, and reported to the International Tourist Exchange, which represents an ideal forum for businessmen in tourism and real estate or in management.

The Exchange Secretariat will be open permanently for inquiries, proposals, specific meetings, and business transactions.

Tourism Information Service-International Tourist Exchange
Via S. Andrea, 17 - 20121 Milano
Tel.: 7752.54 Tel. 320.
Telex: 320911
Via S. Andrea, 17 - 20121 Milano Tel. 784.551.

But in the motor industry specifically—where unfest among toolroom workers is at its highest—the decline in toolmakers' differentials is shown to be no worse than those of other skilled men.

Looking at engineering as a whole, the report concludes that maintenance workers like electricians and fitters have almost identical, and relatively high differentials with the highest loss ofentials in the lowest loss ofentials have been by toolroom fitters and turners, sheet metal workers and patternmakers.

The toolmakers, who in 1977 earned 107 per cent of the average wage for all workers—the highest differential after some maintenance men—are shown to have now fallen to 107 per cent.

In 1977, the average differentials and average pay in the motor industry were higher than in engineering as a whole, says the report. By last year average pay had fallen 10 per cent, and the average but the pay ratio of skilled men had fallen below average.

At the same time pay for semi-skilled workers and labourers in the motor industry had risen “well above the average” engineering as a whole.

The overall differential of the skilled over the semi-skilled was reduced to £1 a week. The toolroom men in the motor industry did not, however, suffer a significantly greater loss of differential than other skilled occupations—unlike their experience in other branches of engineering."

The shift during the 1970s from piece-work to time rates, bringing disproportionate benefits to the semi-skilled, is identified as the biggest factor in the erosion of motor industry differentials.

Trade unions face a dilemma in handling the differential problem says the report, prepared by PEP in conjunction with the Centre for Contemporary European Studies at Sussex University.

The raising of low pay has long been a major objective of

WEEK'S FINANCIAL

Mr. John Cuckney has become chairman of the PORT OF LONDON AUTHORITY after the retirement of Lord Aldington. Mr. Cuckney continues as senior crown agent and chairman of the crown agents for overseas governments and administrations. See Men and Matters, Page 12

Mr. W. M. Everitt has been appointed - divisional managing director of the bearings division of the Birtcher Bearings GROUP. Mr. Everitt, who has been managing director of Glacier Metal Company, the major U.K. member of the bearings division, has been appointed chairman of UNIVERSITY METALLIC PACKING COMPANY, another U.K. member of the group.

and Coward and Mr. C. Smith has become a director of Jolly and Jackson.

Mr. G. T. Dyson, Mr. Mackay and Mr. C. E. Turner join the Board of Burt Marshall Lumsden, while Mr. A. R. Woolle has been made a director of Edward Hall and Brother.

WILLIS, FABER AND DUMAS has made Mr. I. J. Bell, Mr.

the division.

Mr. Peter Gray has been appointed managing director of CHRISTIAN SALVESEN (SEA-FOODS). He succeeds Mr. Barry Leakey who was in this post for the past two years. In addition to his responsibilities as managing director of Christian Salvesen's storage division, Mr. Leakey continues as managing director of the latter. Mr. Gray was

Mr. Kennedy Campbell, chairman and managing director of ARMITAGE SHANKS GROUP, is relinquishing his appointment as managing director but continues as chairman of the group. L. Shanks and Mr. Leonard Klevorick are appointed joint managing directors.

formerly controller of the food division of the Co-operative Wholesale Society.

★

BARING BROTHERS AND COMPANY states that the following chairman appointed directors: Mr. A. O. Akers, Mr. G. G. F. Barnett, Mr. I. S. Beaton, Mr. N. D. Brown, Mr. F. A. A. Carnwath, Mr. J. A. Carwardine.

Mr. D. D. Hurley has been appointed deputy chairman and Mr. J. F. Johnson, managing director of VISION, H.R.M., member of the Electronic Research Group of companies, At the same time Mr. J. E. Roberts and Mr. A. J. Murray, previously managing director of Scan Television have both joined the Board.

Mr. G. S. Cass, Mr. A. J. Commin, JACKSON ASSOCIATES have made a re-structuring and strengthening of their Board of directors. Mr. Alan R. Starkey becomes non-executive chairman and Mr. Michael J. Burton and Mr. Christopher Rensert are appointed non-executive directors.

★
M. A. Kidd and Mr. J. W. White.
★
BRITTAINS has made the following company appointments. Mr. J. C. Wells has been appointed joint deputy chairman and Mr I. Forewell, managing director of BRITTAINS PAPER, while Mr. T. A. K. Wright and Mr. I. C. Wells, have become joint deputy

The following have been appointed to the Board of MATTHEW HALL (INTERNATIONAL DEVELOPMENT), a new subsidiary formed to co-ordinate the overseas sales initiative of all the trading com-

Groups in the Matweh ran
 Sir Rupert Speth chairman,
 Mr. E. A. Bailey, Mr. S. C.
 Bridges, Mr. J. R. P. Giffen,
 D. Harrington secretary, Mr. K. W.
 Harrison, Sir Peter Hayman, Mr.
 A. J. Jarman, Mr. Anthony
 Kershaw, and Mr. S. B. Morley.

★
Mr. Neville Davies, managing director, has been appointed chairman of BRYABO STEEL WORKS, now a GKN sub-group in succession to Sir Douglas Bruce-Gardner.
★
WHITECROFT has made the TRANSQUIP INTERNATIONAL TRAILERS have been appointed to the company's Board of directors. They are Mr. Peter England, product and technical director, Mr. Colin Ess, sales and marketing director, and Mr. Mike Alder, manufacturing director.

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available, whether dividends concerned are interim or final. The subdivisions shown below are based mainly on last

year's timetable.

TO-DAY

Use Gas Indx 2.6575p 0.375p
Utd. Scientific 1.25p
Victor Prods. (Wellhead) 1.835p
Vista Tel 2p
Wega Fin. Can 1.25p

COMPANY MEETINGS—

Black & Anglo Group 2, Change Rd.
N.W. 2.
British Ind. Mariner Hotel, W. 12.
City of London Brewery and Invest Trs.
Winchester House E.C. 2SE.

TO-MORROW

COMPANY MEETINGS—
London Liverpool 11-13, Harrow Square

BOARD MEETINGS—

Affiliated Amalgams Trs. Abingdon
Nigeria, Canadian Overseas Petroleum
BFI English Association of America
E & S Shipowners' Int'l
Emerald Group, Canary

TO-NIGHT

John, Shupley, 10.10
Spiridon
Wilkins and Mitchell, 10.10
Winterbourne Strachan and Paine, 10
Leeds
West Group A. J. Lee, 10.15

Date	Title
Current	Frozen Foods and Freezer Festival (cf. Oct. 5)
Current	British Genetic Exhibition (cf. Oct. 50)
Oct. 4-5	EIA Engineering Exhibition
Oct. 6	London Road
Oct. 10-15	International Mining Exhibition
Oct. 11-13	Electronic Instrument Show
Oct. 11-20	International Business Show
Oct. 15-17	Weich Fair
Oct. 15-25	Do-it-Yourself Exhibition
Oct. 16-20	Junior Fashion Fair International
Oct. 19-30	Daily Express Motorfair
Oct. 21-22	TRAFEX 7—Transport Exhibition
Oct. 25-27	Food Manufacture Exhibition and Conference
Oct. 28-29	British Fashion Fair
Oct. 27-30	International Woodworking Industries Exhibition
Oct. 30-Nov. 2	International Garden and Leisure Exhibition
Oct. 31-Nov. 4	Inst. Plant Engineering and Maintenance Exvn.
Nov. 1-4	Institute of Housing Exhibition and Conference

Oct. 5-9	Int. Materials Handling & Construction Mach. I
Oct. 7-16	Equip-Auto 77
Oct. 10-15	International Maritime Exhibition
Oct. 11-15	Chemical Shipping, Storage Exhibition and Con
Oct. 18-24	Int. Maritime Shipping & Commerce Exhibition
Oct. 17-21	Int. Market of Sub-Contracting M.I.D.E.S.T.
Oct. 20-24	Helsinki International Technical Fair
Oct. 22-26	Int. Ladies Ready-to-Wear Clothing Exhibition
Oct. 28-Nov. 9	Tokyo Motor Show
Oct. 30-Nov. 5	Middle East Construction Exhibition

Oct. 4-8	British Computer Society: Datasat 77 "The User"
Oct. 5	Economic Models: Economic Forecasts for Europe, U.S.A. and Japan
Oct. 5	Association of Surveyors in Civil Engineering: Automation of Surveys
Oct. 5-6	European Study Conference: Trade Unions: Recognition and Collective Bargaining
Oct. 6-7	Financial Times, The Banker, British Caledonian Airways, Investors Chronicle, Latin American Banking

Oct. 12-13	Savings and the Stock Market to 1982
Oct. 13	Institute of Marine Engineers: Safety at Sea
Oct. 13	European Study Conferences: Free Colloquium
Oct. 13-14	Bargaining
Oct. 13-14	Brunei University Employing Graduates
Oct. 13-14	Arabian Market, Saudi Arabia and the Gulf States
Oct. 16-17	Financial Times: The Banker, Investors Chronicle
Oct. 17-21	Gulf Air, Gulf Finance
Oct. 18	Kepler-Tregoe: Decision Making for Success
Oct. 18	Management
Oct. 18	Management Training Consultants: Success

Oct. 19-20	Association of Certified Accountants: Coping with Inflation
Oct. 20	London Chamber of Commerce and Industry: Europe and Africa—Trends and Relations
Oct. 20	Middlesex Polytechnic: Working of Institutions of the European Community
Oct. 21-Nov. 3	Coverdale: Practice of Management Principles
Oct. 25	Building Agency Service: Marketing and Tendering for Overseas Contracts
Oct. 26	Design and Industries Association: Design—Mission Sales Seminar

Oct. 27	Graham and Trotman: Cutting Fuel Costs
Oct. 27	(CB) Export Finance—The Short End
Oct. 27-28	Institute of Personnel Management National Conference
Oct. 31-Nov. 1...	Financial Times, International Chamber of Commerce European Business in World Development
Oct. 31-Nov. 1...	Lloyds of London Press: Financing International Trade
Oct. 31-Nov. 3...	Society of Motor Manufacturers and Traders

<p>AISHO MARINE AND FIRE INSURANCE COMPANY LIMITED</p> <p>EUROPEAN DEPOSITARY RECEIPTS ("EDRs")</p> <p>Pursuant to an announcement made on 31st August 1977 to the Marine and Fire Insurance Company Limited, the following information is being provided:</p>	<p>NIPPON MEAT PACKERS INC. ("CMPA")</p> <p>Business results for the current term ended June 30th 1977, as compared with the same period of the year (August 1, 1975 through June 30th 1976):</p> <table border="1"> <tr> <td>Current</td> <td>Previous</td> </tr> <tr> <td>Net Sales</td> <td>1,000,000,000 Yen</td> </tr> <tr> <td>Operating Profit</td> <td>100,000,000 Yen</td> </tr> <tr> <td>Net Profit</td> <td>80,000,000 Yen</td> </tr> </table>	Current	Previous	Net Sales	1,000,000,000 Yen	Operating Profit	100,000,000 Yen	Net Profit	80,000,000 Yen
Current	Previous								
Net Sales	1,000,000,000 Yen								
Operating Profit	100,000,000 Yen								
Net Profit	80,000,000 Yen								

Dist. Grade	Price in 2 per Cwt
125 41 56	7 47 1/2
120 40 136	6 41 1/2
115 39 136	6 36 1/2
200 25 126	5 16 1/2
275 25 118	4 7 1/2
360 60 106	4 21 1/2
425 60 96	3 6 1/2

[illegible]

ACHTUNG MOSQUITO!

I turn green and yellow with envy when I see the Mosquito. The British knock together a beautiful wooden aircraft that every piano factory over the world is building. There is nothing the British do not do. — Bloch, Marshal Hermann Goering, 15.8.40

Currently needed to house Malaria-infected from ravages of weather.

Private sent donations to John Cunningham Mosquito Aircraft Museum, Walsbury Hall, 4, Winton, 11.2.41

Now, Chart 2014, proceeds annually to R.A.F. Recruitment Fund.

WAYSIDE REGIONAL COUNCIL
 £1,500,000 bills issued 1997
 21 births per cent. 20 12 37 - approx.
 cations were 13.5m.. total outstanding 3m

هذا من الأصل

JAPAN WANTS YOUR PARTS

-it could be your largest market!

The opportunity:- 40 million Calculators; 4 million Sewing Machines; 2½ million Air Conditioners; ½ million Copying Machines; ¼ million Vending Machines; 3½ million Telephones; 41 million Tape Recorders; 15 million Televisions; 4 million Stereos; 4½ million Fans; 4 million Washing Machines; 4 million Refrigerators; 4½ million Vacuum Cleaners; 1½ million Electric Cookers; 200 million Fluorescent Lamps; 13½ million Cameras.

**NIPPON
CHEMI-CON**

NCC WANTS TO HELP YOU

Japan's sales success in Europe has been largely due to the employment of specialised European expertise.

Now **NCC** offers you 45 years of marketing experience in Japan and South East Asia to help expand your business with Far East Electrical and Electronic Original Equipment Manufacturers.

NCC's Import activities include Electronic materials as well as finished components. Sales in Japan are channelled through its distribution networks, which already cover the whole Electronic Industry.

NCC's unique pioneering approach has made it Japan's leading Exporter of Aluminium Electrolytic Capacitors into Europe and the U.S.A. **NCC CAN HELP YOU, PLEASE CONTACT . . .**

Minory Nagasawa
Chemi-Con International Corpn.,
23 Mori Building,
23-7 Toranomōn 1-Chome,
Minato-Ku Tokyo
Tel: 03-501-6241
Telex: J28840

For immediate information contact
Simon Piney,
Europe Chemi-Con (UK) Ltd.,
57-61 West Wycombe Road,
High Wycombe, Bucks. HP11 2LR.
Telephone: High Wycombe (0494) 36113
Telex: 83440 ECCUK

OFFSHORE AND OVERSEAS FUNDS

[illegible][illegible]

	Sept. 30	Sept. 29	Sept. 28	Sept. 27	Sept. 26	Sept. 25	A year ago
Government Seed	79.95	78.40	78.56	77.88	77.65	76.99	59.15
Fixed Interest	79.08	78.57	78.48	78.05	78.66	76.25	58.87
Industrial Ordinary	520.7	515.4	515.9	522.0	521.3	504.7	317.5
Auto Stocks	146.1	144.5	145.4	145.2	149.1	149.7	106.9
Ord. Ute. Yield	5.14	5.20	5.17	5.18	5.18	5.27	7.08
Bondings Ute. Yield (full) ..	15.12	15.29	15.16	15.08	15.07	15.50	20.93
Yield Ratio (net) (%)	94.93	93.32	93.89	94.46	94.27	93.80	70.5
Penalties marked	5.457	5.452	5.453	5.452	5.453	5.457	4.569
Quality margin	—	10.430	10.764	10.681	96.41	92.46	11.364
Quality margin	—	18.844	19.481	20.655	129.18	18.455	11.364

	1977		Since Completion				Sept. 50	Sept. 23
	High	Low	High	Low				
(over, does ...)	79.85	80.45	127.3	49.1c	—Daily			
	(30/0)	(4/1)	(14/15)	(11/17)	Oil—Billed	238.0	243.7	
					Industries	77.8	221.3	
(fixed int., ...)	79.08	80.45	150.4	50.53	Speculative	50.8	45.3	
	(30/0)	(4/1)	(22/11/12)		Total	122.3	151.2	
(nd, Ord., ...)	545.2	357.6	949.2	49.4	Oil—Avg			
	(14/1)	(14/1)	(11/12)	(1/1)	Oil—Billed	252.4	248.0	
					Industries	21.8	15.2	
Gold Mines	149.1	9.5	44.2	(45.5)	Industrial	103.5	81.8	
	(36/0)	(1/2)	(24/75)	(36/10/1)	Total	245.3	145.8	

FT—ACTUARIES INDICES

	Sept. 50	Sept. 23	Sept. 26	Sept. 27	Sept. 28	Sept. 29	1 Year Ago
Industrial Group	216.95	214.46	213.75	216.00	214.43	208.14	126.05
300 Shares	248.61	229.98	241.52	241.83	240.62	236.04	143.94
Div. Yield p.c.	4.95	4.99	4.96	4.95	4.97	5.11	7.22
P/E Ratio (m)	9.66	9.66	9.68	9.65	9.61	9.25	8.00
All Shares	224.45	221.85	222.96	232.55	230.68	214.52	133.77

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FT SHARE INFORMATION SERVICE

HOTELS-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	Hotel de Ville	42.1	1.00	2.38	1.00	2.38
Dec. 1976	Hotel de Ville	42.1	1.00	2.38	1.00	2.38
Dec. 1976	Hotel de Ville	42.1	1.00	2.38	1.00	2.38
Dec. 1976	Hotel de Ville	42.1	1.00	2.38	1.00	2.38

INDUSTRIALS (Miscel.)

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

ENGINEERING-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

ENGINEERING MACHINE TOOLS

FOOD, GROCERIES, ETC.

DRAPERY AND STORES-Cont.

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

CINEMAS, THEATRES AND TV

DRAPERY AND STORES

BUILDING INDUSTRY, TIMBER AND ROADS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

AMERICANS-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

BEERS, WINES AND SPIRITS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

LOANS (Miscel.)

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

COMMONWEALTH & AFRICAN LOANS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

CORPORATION LOANS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

INTERNATIONAL BANK

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

BANKS AND HIRE PURCHASE

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

CANADIANS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

SHORTS (Lives up to Five Years)

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

BRITISH FUNDS

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

AMERICANS-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

AMERICANS-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

AMERICANS-Continued

Dividend	Stock	Price	Div	Yield	Div	Yield
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80
Dec. 1976	British Petroleum	125.0	1.00	0.80	1.00	0.80

INDUSTRIALS - Continued

Stock	Price	Div	Yield	Vol
Anglo American	120.00	1.50	1.25%	100
Anglo-African	110.00	1.20	1.09%	80
Anglo-Asian	100.00	1.00	0.90%	60
Anglo-Japanese	90.00	0.80	0.89%	50
Anglo-Norwegian	80.00	0.60	0.75%	40
Anglo-South African	70.00	0.50	0.71%	30
Anglo-Tanzanian	60.00	0.40	0.67%	20
Anglo-Tanzanian	50.00	0.30	0.60%	10
Anglo-Tanzanian	40.00	0.20	0.50%	5
Anglo-Tanzanian	30.00	0.10	0.33%	2

INSURANCE - Continued

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

PROPERTY - Continued

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

TRUSTS - Continued

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

TRUSTS - Continued

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

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MINES - Continued

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

OVERSEAS TRADERS

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

TEAS

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

REGIONAL MARKETS

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

DIAMOND AND PLATINUM

Stock	Price	Div	Yield	Vol
Anglo-Continental	120.00	1.50	1.25%	100
Anglo-Continental	110.00	1.20	1.09%	80
Anglo-Continental	100.00	1.00	0.90%	60
Anglo-Continental	90.00	0.80	0.89%	50
Anglo-Continental	80.00	0.60	0.75%	40
Anglo-Continental	70.00	0.50	0.71%	30
Anglo-Continental	60.00	0.40	0.67%	20
Anglo-Continental	50.00	0.30	0.60%	10
Anglo-Continental	40.00	0.20	0.50%	5
Anglo-Continental	30.00	0.10	0.33%	2

